

# APPENDIX M – FLUID MINERALS

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# FLUID MINERALS

## OIL AND GAS REASONABLY FORESEEABLE DEVELOPMENT (RFD)

### INTRODUCTION

At the time the 1984 Headwaters RMP was prepared little additional leasing was anticipated to take place because most available leases had already been acquired under existing established leasing regulations with appropriate stipulations for special conditions. It was also anticipated that a relatively large number of permits to drill might be sought, given the accelerated level of exploration activity that was being driven by economic conditions at the time and relatively new discovery of prospects for deep structurally trapped oil in the Montana Overthrust Belt. Laws, regulations, and rules were in-place to provide guidance with these leasing and permitting activities. It was anticipated that oil and gas drilling would be a part of the foreseeable future of resource development within the Planning Area.

Despite the flurry of exploration activity in the Montana Overthrust Belt in 1983, the only two areas of oil and gas production were in Teton and Ponderosa counties, east of the Rocky Mountain Front in areas that have since been removed from the Planning Area.

The Reasonably Foreseeable Development scenario is an estimate of oil and gas activity expected because of resumed oil and gas leasing in the Planning Area. The scenario is hypothetical in that drilling may occur anywhere in the planning area where an oil and gas lease allowing surface occupancy is issued. Actual drilling proposals that result from leasing, if any, will likely differ in location from those anticipated by this RFD scenario. It is also possible that leasing could result in either more or fewer drilling proposals than presented in the scenario.

The RFD scenario attempts to portray the most reasonable and likely number of wells expected from a leasing decision on the Butte Field Office Planning Area. It is derived from knowledge of the USGS plays, Energy Information Administration price forecasts, oil and gas occurrence and development potential classifications for the Planning Area, and historical activity.

Development potential is a ranking system, which is created so planners can evaluate the potential cumulative impacts of an oil and gas leasing decision on a designated area. BLM petroleum geologists rank the development potential of the planning area based on the probability, at this point in time, of oil and gas drilling occurring in the future. It is important to understand that development potential is a dynamic ranking system, which changes with time as new data and ideas become

available. The development potential can also change as a function of the economics of oil supply and demand.

## OCCURRENCE AND DEVELOPMENT POTENTIAL

### Occurrence and Development Potential Rankings

BLM staff geologists have classified the potential for occurrence and development of oil and gas resources within the Butte Field Office Planning Area. Their analysis is based on bedrock geologic mapping, geophysical data, and 110 oil and gas wells drilled in Planning Area. A summary of the used for discussion and development of the occurrence and development potential sections of this report can be found in the mineral report prepared for this RMP. The potential for oil and gas resource development within the Planning Area is shown on **Figure A-1**.

On **Figure A-1**, areas have been designated as having moderate, low, and very low potential for the occurrence and development of oil and gas resources. As with the occurrence potential, there are no areas of “high” development potential within the Butte Field Office Planning Area. High development potential areas occur only within proven producing petroleum provinces or in areas with a significant number of hydrocarbon “shows”. Areas of moderate development potential have a significant thickness of sedimentary section present that includes possible source and reservoir rocks. An area having a low potential for development has a thin sedimentary section present or there is insufficient subsurface data available to analyze the potential. It also lacks source or reservoir rocks or is metamorphosed. An area of very low development potential has no sedimentary section at the surface or insufficient data for a different classification. These areas also include areas of Federal lands that are unavailable for leasing. Development potential is not a prediction of precise future drilling locations and should not be used as a gauge of future interest or lack of interest in leasing. Oil and gas companies have numerous sources of proprietary data not available to the BLM (such as seismic data or internal geologic reports), which they use prior to making financial commitments to lease or drill. Therefore, even though an area is rated as very low development potential at this time with a low probability for any wells being drilled, a company may still be interested in leasing that area, should it be made available.

### Drilling Activity Forecast

In order for the BLM to be able to analyze the effects of renewed oil and gas leasing, and possible impacts related to exploration, development, and cumulative effects, it is

necessary to estimate how many wells industry might drill in the next 20 years. The following RFD scenario has been developed using historical oil and gas development, and oil “play” information from the USGS, potential development maps and other data from BLM files, and a number of other technical sources.

The BLM has mapped the potential for occurrence of oil and gas under the Butte Field Office Planning Area and the potential for industry to develop those possible resources. The classification of development potential is depicted on **Figure A-1**. From these maps and other information, including leasing history and past and present economics, a forecast of the number of wells that might be drilled in the Planning Area on lands of all mineral ownerships is made.

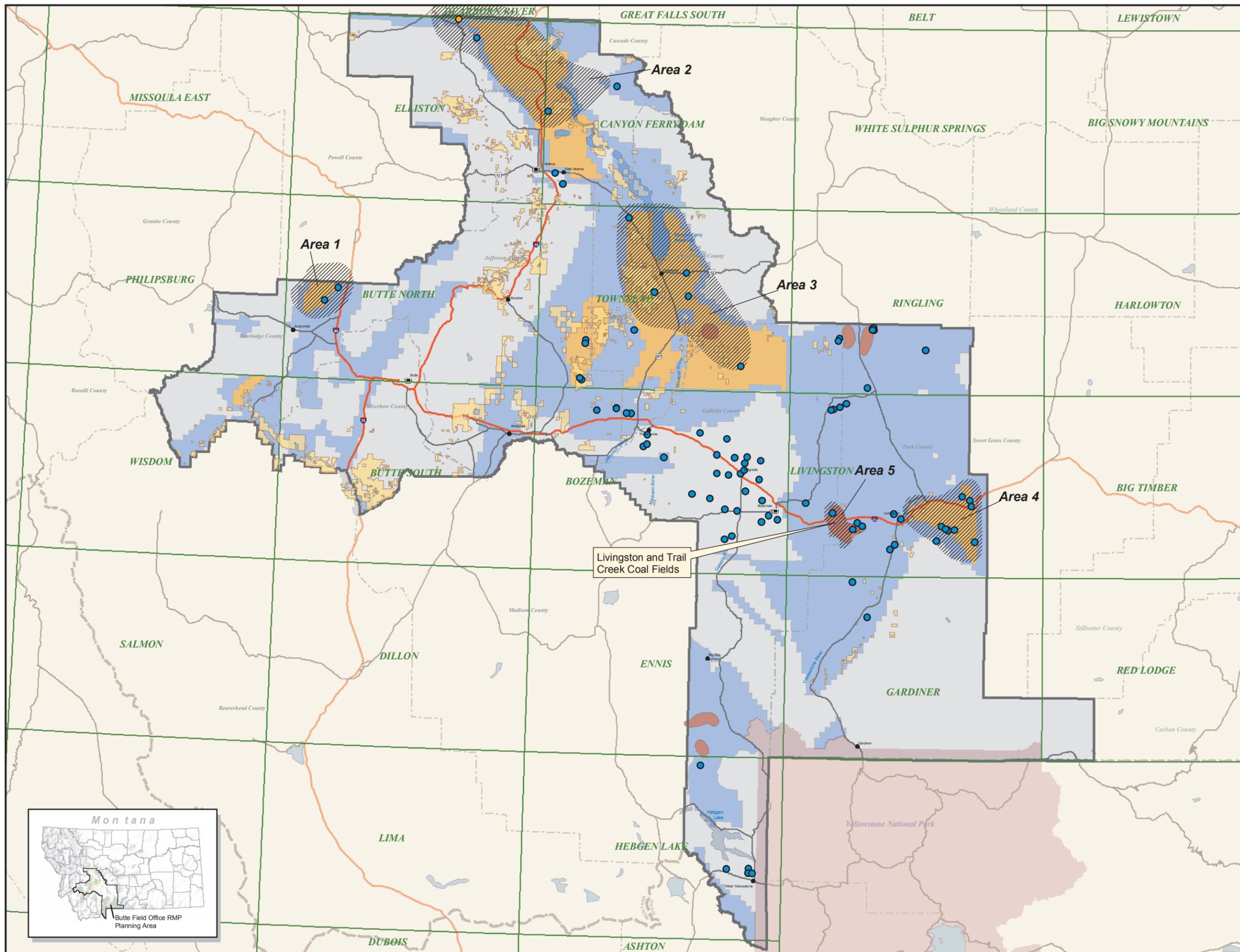
Based on this analysis, an estimate was made that as many as nineteen (19) conventional oil and gas wildcat wells (exploratory wells drilled in an area with no existing production) might be drilled in the Butte Field Office Planning Area in the next 15 to 20 years (**Table 1**). Of these nineteen (19) wells, it is estimated that thirteen (13) would be “dry” holes (no economically producible oil or gas is discovered). Dry holes would be plugged and abandoned with surface reclamation occurring shortly afterward. It is further estimated that six (6) of the wells could have oil or gas discoveries, with two located on Federal minerals, and the others located on private or State lands. Each of the discovery wells would probably prompt additional step-out wells. A “step-out well” is a well drilled adjacent to or near a proven well to establish the limits and continuity of the oil or gas reservoir and/or to assist with production. It was estimated that a total of twelve (12) step-out wells would be drilled, two for each discovery. In addition to conventional oil and gas wells, it is anticipated that as many as 40 wells (**Table 1**) would be drilled for coal bed natural gas in limited and scattered areas of known sub-bituminous coal resources located Gallatin and Park Counties; most likely in the Trail Creek Road area near Bozeman Pass (Livingston and Trail Creek Fields).

The first four general geographic areas within the Butte Field Office Planning Area, where conventional oil and gas exploration is predicted to occur are shown on **Figure A-1**. Each of the four areas is associated with one or more play areas described above in the section entitled USGS Hydrocarbon Provinces and Plays. It is anticipated that the 15 projected wildcat wells would be drilled somewhere within the boundaries of these four play areas. (**Table 1**)

**Area # 1** - Area #1 is referred to on **Figure A-1** as the “Southern Deerlodge Valley Basin Area”. This area occurs in the southernmost portion of a fault bounded Tertiary-aged basin that is located in the Deerlodge Valley. Along the eastern edge of this basin volcanic rocks obscure a thin section of Tertiary age basin fill sediments that in turn overlie Boulder Batholith rocks (Kirk 2005). Further to the west within this basin, rocks of Miocene to Eocene age have been encountered in previous drilling. The rocks are all non-marine and consist of sands and gravels of alluvial channels interlayered with sand, silt, and clay-rich alluvial overbank deposits that are interspersed with fine-grained sediments deposited in lakes and marshes. These sediments have accumulated in thickness as great as 10,000 feet (3,048 meters). Fluvial sandstones are thought to be potential reservoir rocks with the source of oil and gas being either organic material buried deeply in the Tertiary basin proper or having migrated from Paleozoic sediments that lie beneath the Tertiary basin fill or across the basin margin faults. The thickest and most complete section of Paleozoic rocks lies to the west of the holes shown in the area of moderate potential (**Figure A-1**). Two holes have been drilled within the Planning Area and five more have been drilled in a similar geologic setting immediately to the north of this area. These holes were drilled from 6,411 feet (1,954 meters) to as much as 11,774 feet (3,589 meters) deep (Kirk 2005). One well, the Amoco 1 Johnson, encountered good oil shows in the Tertiary basin fill sediments. Two exploratory wells for oil and gas might be expected in the next 15-20 years in this portion of the

**Table 1**  
**Drilling Activity Forecast (RFD)**  
**Mineral Assessment Report**

Area	Total Wildcat Wells	Dry Holes (Wildcats)	Wildcat Discoveries	Step-out Wells	Commodity
Area 1	2	2	0	0	
Area 2	5	4	1	2	Gas
Area 3	4	3	1	2	Gas
Area 4	4	2	1 deep 1 shallow	2 2	Gas Oil
Barrett Corp. Wells	4	2	2	4	Gas
<b>Total Conventional Wells</b>	<b>19</b>	<b>13</b>	<b>6</b>	<b>12</b>	
<b>Area 5 (Coalbed Natural Gas Only)</b>	<b>16</b>	<b>10</b>	<b>6</b>	<b>24</b>	<b>Coal bed Natural Gas</b>



**Occurrence Potential**

- Moderate
- Low
- Very low

**Development Potential**

- Area of Reasonably Foreseeable Development and Drilling Activity

**Other Symbols**

- MBOGC Oil and Gas Wells
- Currently Drilling Well
- Livingston and Trail Creek Coal Fields
- Minor Coal Fields

**Map Features**

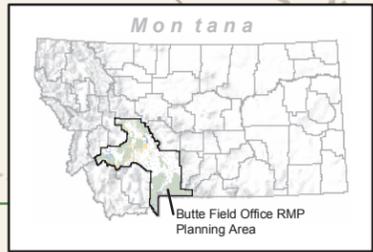
- BFO Boundary
- 1:100,000 Map Boundaries
- Bureau of Land Management (BLM) Land

**Scale and Orientation**

N

0 Miles 20

No warranty is made by the Bureau of Land Management (BLM) for use of data for purposes not intended by BLM.



**FIGURE A-1**  
 Oil and Gas Occurrence and  
 Development Potential  
 Mineral Assessment Report  
 BLM, Butte Field Office  
 Butte RMP and EIS

Planning Area. They would probably lie to the north and west of the holes shown, closer to basin margin faults with potentially thicker sequences of Paleozoic source rocks underlying Tertiary basin fill adjacent to the fault zone. As only about 20 percent of the land within this basin is underlain by federally administered subsurface mineral rights and more than 87 percent of the surface is privately owned (no BLM surface ownership), it is unlikely that any of the wells would be drilled on federal lands. It is also unlikely that there would be any discoveries in this area.

**Area #2** - Area #2 is referred to on **Figure A-1** as the “Imbricate Thrust Zone”. The area occurs both to the north and east of Helena, Montana, in a sequence of sediments that are thick and structurally thickened by imbricate thrust faulting associated with the Eldorado and Reff thrust faults. Here Cenozoic sediments unconformably overly Mesozoic and Paleozoic sediments, and basement Precambrian-age rocks. Only two oil and gas wells have been completed in this area between 1975 and 1990. One, the Getty well, was spudded in Mississippian Lodgepole Limestone and drilled in Paleozoic sediments to a final depth of 12,731 feet (3,880 meters). It encountered eleven thrust faults that repeated the Lodgepole Limestone eight (8) times. The other well drilled by Arco, was completed at a depth of 5,002 feet (1,525 meters). It was spudded in the Precambrian Belt sediments and drilled through the Eldorado thrust fault at 2,500 feet (762 meters) and into good potential host rocks of the Mississippian Madison Formation, in which it remained until the bottom of the hole. Unocal drilled a third, very deep (17,818 feet or 5,431 meters) dry well, in the northern portion of this area (**Table 1**). The recently drilled Suncor well, described in the Exploration Drilling section, is present in the northernmost portion of the Planning Area on the Sieban Ranch near Flesher Pass. Area 2 is thought to have moderate oil and gas potential because of the significant thicknesses of Paleozoic sediment (known to contain good reservoir and source rocks) in a zone that is complicated and repeated by thrust faulting that can create stratigraphic and structurally controlled traps by folding and the juxtapositioning of rocks across the thrust faults. Five wells are expected to be drilled in this area within the next 15-20 years. One of these wells is predicted to have significant shows of oil and gas warranting offset drilling of two additional wells. The tests in this area can be deep and expensive, and the structure complex and difficult to understand. Most of the BLM lands in Area 2 occur in two continuous blocks and when combined with split estate lands with federal minerals make up about 20% of the entire area. The large contiguous area in the northeastern portion of Area 2 lies to the east of the intensely imbricated thrust fault zone that has seen exploration drilling along the western margin of this play area. It is possible that one or more of the five exploration wells could be drilled on federal lands, but with a small likelihood of a discovery.

**Areas #3** - Area #3 is referred to as the “Helena Salient Gas Play Zone”. This zone occurs over a very large area in the east-central portion of the Planning Area (**Figure A-1**). The area is underlain by Jurassic (locally Cretaceous) through Cambrian age rocks in a sediment package as much as 10,000 feet (3,048 meters) thick. The area has been thrust faulted along north-south structures that have resulted in a series of parallel north-south anticlines and synclines. The entire sequence can be overlain by 1,600 feet (488 meters) (in the west) to as much as 5,000 feet (1,524 meters) (in the east) of volcanics in the Elkhorn Mountain area. Hydrocarbons have been reported from a well along the east flank of the Mauldow Basin in a well drilled to 11,592 feet (3,533 meters) into Precambrian rock. Gas shows were reported from Cambrian sediments at a depth of about 11,000 feet (3,353 meters). Elsewhere in the area, several shallow wells (<1,005 feet or 306 meters) had oil shows in the Cambrian and Devonian portion of the section. It may be necessary to drill through sub-thrust Precambrian rocks to find deep potential reservoir rocks (10,000-12,000 feet or 3,048-3,658 meters) in the western portion of the area and 15,000-25,000 feet (4,572-7,620 meters) in the eastern portion of the area. Areas of moderate potential in the Helena Salient area are coincident with the location of mapped anticlinal structures. Three wells have been drilled since 1975, one of which was a dry hole drilled in 1991. Four wells are anticipated in the next 15-20 years, additional shows are expected, and one discovery well is predicted with one or two offset wells (limited number of wells because of depth and cost of drilling). Although the BLM owns surface and mineral rights to some 37,000 acres, about 20% of Area 3) more than half of that area lies within the Limestone Hill Montana Army National Guard Training area, which is contaminated with unexploded military ordinance and the subject of a current Legislative EIS that proposes to withdraw the area from future mineral entry. It is unlikely that any federal wells would be drilled in Area 3. Mineral withdrawal normally does not apply to access for the Mineral Leasing Act, therefore access for fluid mineral drilling within the Limestone Hills Training Area may be possible. Assuming the issue involving safe access with respect to unexploded ordinance can be resolved one well may be drilled on Federal lands within the Limestone Hills Training Area.

**Area #4** - Area #4 consists of the “Crazy Mountain Oil and Gas Play” on **Figure A-1**. This area occupies most of the northern portions of Gallatin and Park Counties in the easternmost portion of the Planning Area as a broad extensive area of potential oil and gas resources. In particular the area east of Livingston appears to have a moderate potential. Non-marine Upper Cretaceous rocks of the Livingston group cover most of the area and range in thickness from 9,000 feet (2,743 meters) (in the west between Belgrade and Bozeman) to about 1,000 feet (305 meters) along the eastern Planning Area boundary.

Concealed beneath these sediments are Cretaceous marine sediments and beneath them a complete sequence of Paleozoic sediments that have locally been thrust faulted, repeating the section. In this area, the Superior 22-25 Windsor well was drilled on the Hunter Anticline to a depth of 8,990 feet (2,740 meters). This well encountered gas in the Cretaceous Eagle sandstone at 1,950 feet (594 meters). Thrust faults were encountered in this well that bottomed in Cambrian sediments, suggesting that multiple stacked targets may be present at depths of 10,000-20,000 feet (3,048-3,658 meters), in addition to the shallow Cretaceous gas targets. Numerous anticlines have been identified in the section that may represent structural traps. Six wells have been drilled since 1975 and none in recent years (post 1990). It is envisioned that four (4) wells may be drilled in this area including one deep well east of Livingston around the interstate and three shallow wells exploring for Cretaceous gas resources. It is envisioned that the deep well and one of the shallow wells would yield discoveries that warranted step-out drilling of two holes for each discovery. These wells will be either on National Forest System Lands, or more likely, on lands with private mineral rights that make up about 94% of Area 4.

**Area #5** - Other places within the Butte Field Office Planning Area, where gas exploration is predicted to occur are areas of coal bed natural gas potential associated with known sub-bituminous coal deposits. Areas of coal bed natural gas potential where activity is predicted in the reasonably foreseeable development scenario occur in one area labeled Area 5 on **Figure A-1**. Overall it is envisioned that initially ten exploration wells would be drilled, and that six of these would discover coal bed natural gas resources that would warrant the drilling of an additional 24 step-out wells to develop the resources (**Table 1**). These would all likely be non-federal wells.

The reasonably foreseeable development scenarios for these areas have been developed for Gallatin and Park Counties by the Bureau of Land Management and the Montana Board of Oil and Gas Conservation (BLM and MBOGC, 2003). It has been estimated that as many as five to 15 wells would be drilled in Gallatin County and that of these, as many as five to 10 would be producing wells from one field (BLM and State of Montana, 2003). Two locations were permitted for exploration drill holes for coal bed natural gas on untested private land in section 13 and 14 of T. 2 S., R. 7E. in the Trail Creek coal field by the state of Montana in 2001. The wells were scheduled to be drilled to depths of about 5,500 feet (1,676 meters) to test the Upper Cretaceous-age Telegraph Creek-Eagle Sandstone interval along the crest of an anticlinal structure. However, legal challenges involving Gallatin County and the formation of a local zoning district tied up the drilling process and the permits to drill expired in January of 2003. Legal issues need to be resolved in the Trail Creek area before

drilling of this previously permitted well might be undertaken. The BLM administers a small number of isolated tracts of split estate minerals in the Trail Creek coal deposit area, but most of the exploration potential lies on private land with separated surface and mineral estate. Assuming that natural gas prices remain high, it is likely that exploration drilling will ultimately be permitted on private land in this area.

In Park County it has been estimated that as many as 10-25 coal bed natural gas exploratory wells might be drilled with as many as 10 to 20 becoming producing wells also from one field (BLM and state of Montana, 2003).

The Bill Barrett Corporation recently (May 2, 2007) initiated a four well drilling program in northern Park County within the Butte Field Office boundaries. The four locations are located in T. 4 N., R. 8 E. and T. 5 N., R. 8 E., None of the locations are located on Federal minerals. The first well in the program (the Draco #10-15, NW1/4, SE1/4, Sec. 15, T. 4N, R. 8E) to be spud in has reached total depth and it has apparently had production casing set (September 14, 2007, Rocky Mountain Oil Journal). The Press has announced that it will be tested in the fall of 2007. The second well is being drilled as this is written (October, 2007). For purposes of this RMP it is assumed by the BLM that two of the wells in this drilling program will be producing wells and that these two wells would each have two producing development wells drilled of which one would be on BLM minerals. The BLM has also assumed that these would be gas wells. This area is an actual prospect that is being drilled. The BLM does not have detailed information on the prospect and does not wish to guess on its size and surface dimensions. As such we have not defined it as a specific area.

## Surface Disturbance Impacts

This part of the Reasonable Foreseeable Development Scenario includes information to characterize the type of disturbance projected. The first section **Table 2** predicts the number of acres of ground surface disturbance resulting from exploration and field production activities, regardless of surface ownership. The calculation of acres disturbed relies upon assumptions derived from past exploration activity in western Montana including the Dillon Field Office and the Butte Field Office and existing production from the Overthrust Belt and south central Montana. All calculations assume a maximum acreage figure for analysis purposes if past activities show a range (e.g., 3.5 acres would be used if the range is 2.5-3.5 acres). This assumption was made in order to portray what the largest amount of disturbance could reasonably be expected to be. Reclaimed lands are also included in these calculations. Although no production exists in the Butte Field Office, there have been 110 test wells in the general area of the Butte Field Office. The area is still considered a wildcat area with no commercial discoveries. Therefore, in order to model a

**Table 2 – Estimation of Surface Disturbance Assumptions****Conventional Oil and Gas**

- The maximum area cleared per well pad would be **3.5 acres** (about 380 ft. x 400 ft.) and 2.3 acres would be stabilized in about 2 years.
- The maximum area cleared per access road per well would be **17 acres** (about 40 ft. x 18480 ft.) and 9 acres would be stabilized in about 2 years.
- All field gathering pipelines for gas (2-4 inch diameter) will follow existing or new access roads and no additional disturbance would result.
- The maximum area cleared for trunk lines to transport gas from four different fields to the existing transmission lines running through the Butte Field Office would be **254.5 acres** (about 25 ft. x 443,520 ft.) and the entire area of disturbance would be stabilized in about 2 years. All perennial stream crossings would use horizontal drilling to avoid disturbance to the stream, its bed, and banks.
- Produced oil would be trucked from the well sites.
- Dry and abandoned wells would be reclaimed.

**Coal Bed Natural Gas**

- The maximum area disturbed per well site would be **0.25 acres** per well pad. Most sites are not cleared (no pad is constructed).
- Access to individual well sites would be two track trails.
- Surface disturbance for field and sales compressors would be 0.5 miles.
- Gathering lines from the well sites to the field and sales compressors would follow access routes and be buried.

production scenario, many assumptions are necessary. These assumptions include location, productive capability, reservoir parameters, and hydrocarbon type and are based on information from representative oil and gas fields in Western Montana. Assumptions for both gas and oil fields are included here. **Table 1** lists the total number of wells (conventional and coal bed methane) forecast for the Butte Field Office.

It is assumed that 6 conventional oil and gas wells would prove to be productive. Additional step-out wells would be drilled. For production the access roads and rights of way would be stabilized by seeding the cut and fill slopes and surfacing the top of the road bed. A small portion of the road rights of way would be returned to a pre-disturbance condition. A major portion of the well pads (up to two thirds) would be rehabilitated. The gas/oil gathering lines would be constructed along existing or new access roads resulting in no additional disturbance. Gas trunk lines would be completely rehabilitated.

It is assumed that 30 coal bed methane wells (including the original discoveries and additional step-out wells) would prove to be productive. Access routes would be two track trails wherever possible requiring no reclamation. When constructed roads are required they will be built to the lowest standard appropriate and the right of way partially reclaimed for use during production. Pipelines would be constructed along existing or new access routes minimizing disturbance.

**Table 3** displays the estimated amount of disturbance (in acres) expected from drilling and production activity predicted in the drilling activity forecast. It is based on the previously discussed assumptions and successful reclamation after construction operations are completed or oil and gas and coal bed methane operations cease.

**Table 4, Table 5, and Table 6** provide technical assumptions for oil and gas and coal bed natural gas activity in the Butte Field Office.

<b>Table 3 - Direct Cumulative Surface Disturbance</b>				
	<b>Unsuccessful Wildcat Wells</b>		<b>Productive Wells</b>	
	<b>Acres Disturbed Pre-Site Reclamation</b>	<b>Post-Site Reclamation</b>	<b>Acres Disturbed Pre-Site Reclamation</b>	<b>Post-Site Reclamation<sup>1</sup></b>
<b>Conventional Oil and Gas Activity</b>				
Well Sites	45.5	0	63	21.5 (2 years)
Access Roads	221	0	189.6	103.7 (2 years)
Pipelines	0	0	254.5	0 (2 years)
<b>Coal Bed Natural Gas Activity</b>				
Well Sites	1	0	7.5	5 (2 years)
Compressors, Pipelines, and Access Roads	3	0	220	147 (2 years)
<b>TOTAL ACRES DISTURBED</b>	<b>270.5</b>	<b>0</b>	<b>734.6</b>	<b>277.2 (2 years)</b>

<sup>1</sup>The figures in this column represent acres required for existing facilities after interim reclamation.

<b>Table 4 - Gas Field Assumptions</b>
<ul style="list-style-type: none"> <li>Gas fields would be discovered east of Lincoln (Area #2), northeast of Townsend (Area #3), east of Livingston (Area #4) and near Wilsall (where the Barrett Corporation is now drilling).</li> <li>Fields would be roughly 3 square miles in surface area except for the field developed near Wilsall where the Barrett Corporation is drilling which would be 6 square miles.</li> <li>Full development would require 3 wells (one discovery and two step-out wells) except for the field being tested by Barrett. That field would consist of 2 discoveries and 2 dry holes. The 2 discoveries would each have two step-out wells. 3-D seismic would be run to refine step out well locations.</li> <li>Gas would be transported by pipeline an order to be marketed. From Area #2 it would be transported west to a main north-south transmission line running through the Butte Field Office for approximately 18 miles. From Area #3 it would be transported approximately 30 miles to a main east-west transmission line running through the Butte Field Office. From Area #4 it would be transported approximately 6 miles north to a main east-west transmission line running through the Butte Field Office. From the area being explored by the Barrett Corporation it would be transported approximately 30 miles south to the main east-west transmission line running through the Butte Field Office.</li> <li>Compressor stations would be necessary along the pipeline route, with one of those stations being within one mile of the main line in order to boost the pipeline gas to the pressure of the main line.</li> <li>Wells would be drilled 10,000 to 15,000 feet deep. One well would be drilled from each well pad. Only one development well would be drilled at a time.</li> <li>Wells would take approximately 300 days to drill.</li> <li>Condensate, gas, and water separation would occur at the wellsites. Water disposal would be into a lined pit at the surface or water would be injected into the subsurface through a dry hole converted into a water disposal well. Condensate would be shipped by truck (1 truck every 4 days).</li> <li>The field is expected to produce for 25 years.</li> <li>Well servicing, repair, and maintenance would continue throughout the life of the field. Well servicing operations would take 5 days per well and occur 6 times /well of the 25 year life of the field. A well tender would make one trip per well per day.</li> </ul>

**Table 5 - Oil Field Assumptions**

- An oil field is possible in the vicinity of Livingston.
- Field would be roughly 1 ½ square miles in surface area.
- Full field development would require 3 wells (one discovery and two step-out wells), 3-D seismic would be run to refine step out well locations.
- Oil would be transported by truck to the appropriate refining facility.
- Wells would be 2,500 to 3,500 feet deep. One well would be drilled from each well pad. Only one development well would be drilled at a time.
- The wells would take approximately 21 days to drill.
- Oil, gas, and water separation would occur at the well sites. Water disposal would be into a lined pit at the surface or water would be injected into the subsurface through a dry hole converted into a water disposal well. Gas would be used on lease to separate oil and water and to heat oil. Gas not used on lease would be sold or vented/flared to the atmosphere. If sufficient gas quantities are produced this gas may also be captured and sold. For this analysis all unused gas is assumed to be reinjected for pressure maintenance
- The field is expected to produce for 25 years.
- Well servicing, repair, and maintenance continue throughout the life of the field. Well servicing operations would take 5 days per well and occur 6 times/well over the 25 year life of the field. A well tender would make one trip per day.

**Table 6 - Coal Bed Natural Gas Field Assumptions**

- Two coalbed natural gas fields are expected in the area of Bozeman Pass within the Trail Creek-Livingston coal field.
- Each field would be approximately 1.75 square miles in surface area.
- Each field would require 1 field compressor and one may sales compressor may be needed depending on where the wells are located.
- Ten to 27 miles of plastic low-pressure gathering lines would be required. These would be laid in the travel routes and follow existing roads to field compressors. Two to four miles of low-pressure steel lines would be laid from the field compressors to the sales compressor.
- No more than 20 miles of sales lines would be laid to the main transmission line in the area.
- Total disturbance excluding the actual well sites including compressors, pipelines, and access routes would be 220 acres.

## PROCEDURES IN OIL AND GAS RECOVERY AND OPERATIONS

### GEOPHYSICAL OPERATIONS

Oil and gas reservoirs are discovered by either direct or indirect exploration methods. Direct methods include mapping of surface geology, observing oil or gas seeps, and gathering information on hydrocarbon shows observed in drilling wells. Indirect methods include various types of geophysical exploration such as seismic, gravity, and magnetic surveys, which use remote data gathering techniques to delineate subsurface structures or lithologic changes that are not directly

observable, but that may contain or trap oil and gas. Data is often acquired using equipment mounted on surface vehicles or aircraft. Information from geophysical exploration can lead oil companies or others to request that lands be offered for lease, or assist in the selection of drill sites on existing leases. However, a federal oil and gas lease is not required in order to conduct geophysical operations. Existing road systems are used where available. Roads may be cleared of vegetation and loose rocks to improve access for trucks if the permit allows that action.

Blading and road construction for seismic operations are not usually allowed so that environmental impacts are minimized. In areas with rugged terrain or without

access roads, and during certain seasons of the year, seismic work is conducted by helicopter rather than by ground vehicles. Other geophysical operations that do not cause additional surface disturbance include remote sensing, and gravity, and aeromagnetic surveying.

## **Geophysical Permitting Procedures and Regulations**

Geophysical operations on and off an oil and gas lease are reviewed by the Federal Surface Management Agency (SMA), which can include the BLM, Bureau of Reclamation, or U.S. Forest Service (USFS). Close cooperation between the operator and the managing agency during geophysical operations minimizes surface impacts and protects other resources.

### ***Notification Process***

Geophysical operations on public lands are reviewed by the BLM. Geophysical exploration on public lands requires review and approval following the procedures in 43 CFR Subparts 3150, 3151, and 3154. In the Butte Field Office, the Field Manager is authorized to approve geophysical operations. The responsibilities of the geophysical operator and the Field Manager during geophysical operations are described below.

### ***Geophysical Operator***

The operator is required to file a Notice of Intent to Conduct Oil and Gas Exploration Operations (form 3150-4) for operations on public lands administered by the BLM. Maps (preferably 1:24,000 scale topographic maps) showing the location of the proposed lines, access routes and ancillary facilities must accompany the Notice of Intent. When the Notice of Intent is filed, the authorized officer may request a prework conference or field inspection. Special requirements or procedures that are identified by the authorized officer are included in the Terms and Conditions for Notice of Intent to Conduct Geophysical Exploration (form 3150-4 and a copy of the state requirements). Any changes in the original Notice of Intent must be submitted in writing to the authorized officer. Written approval must be secured before activities proceed.

Bonding of the operator is required. A copy of proof of satisfactory bonding shall accompany the Notice of Intent. Proper bonding may include a \$5,000 individual, \$25,000 statewide, or \$50,000 nationwide geophysical exploration bond. In lieu of an exploration bond, a statewide or nationwide oil and gas bond may be used if it contains a rider for geophysical exploration. The operator is required to comply with applicable federal, state, and local laws such as Federal Land Policy and Management Act of 1976, the National Historic Preservation Act of 1966, and the Endangered Species Act of 1973, as amended. Earth-moving equipment shall not be used without prior approval. Operators may be required to submit an archeological evaluation and the

agency provide NEPA documentation for cultural and wildlife resources if dirt work or other surface disturbance is contemplated, or if there is reason to believe that these resources may be adversely affected.

When geophysical operations have been completed including any required reclamation or rehabilitation, the operator is required to file a Notice of Completion (form 3150-5) including certification that all terms and conditions of the approved Notice of Intent have been fulfilled. The operator must also submit a map that shows the actual line location, access route, and other survey details.

### ***BLM Field Manager (authorized officer)***

The authorized officer is required to contact the operator within five working days after receiving the Notice of Intent to explain the terms of the notice, including the “Terms and Conditions for Notice of Intent to Conduct Geophysical Exploration,” current laws, and BLM-administrative requirements. At the time of the prework conference or field inspection, written instructions or orders are given to the operator. The authorized officer is responsible for the examination of resource values to determine appropriate surface protection and reclamation measures. Compliance inspections during the operation ensure that stipulations are followed. The authorized officer is required to make a final inspection following filing of the Notice of Completion. Compliance inspections upon completion of work ensure that required reclamation is properly completed. When reclamation is approved, obligation against the operator’s bond is released. The BLM has 30 days after receipt of the Notice of Completion to notify the operator whether the reclamation is satisfactory or if additional reclamation work is needed. Bonding liability will automatically terminate within 90 days after receipt of the Notice of Completion unless the authorized officer notifies the operator of the need for additional reclamation work.

### ***State Standards***

Geophysical operators register with the state through the County Clerk and Recorder’s office. State regulations include requirements for permitting geophysical activities such as shothole locations, drilling techniques, plugging techniques, bonding, and reclamation.

### ***Mitigation***

When a geophysical Notice of Intent is received, restrictions may be placed on the application to protect resource values or to mitigate impacts. Many of these requirements may be the same as the oil and gas lease stipulations adopted in the RMP. Other less restrictive measures may be used when impacts to resource values will be less severe. This is due in part to the temporary nature of geophysical exploration. Seasonal restrictions may be imposed to reduce conflicts with wildlife, watershed damage, and hunting activity. The decisions

concerning the level of protection required are made on a case-by-case basis when a Notice of Intent is received.

## LEASING PROCESS

Federal oil and gas leasing authority is found in the 1920 Mineral Leasing Act, as amended, for public lands and the 1947 Acquired Lands Leasing Act, as amended, for acquired lands. Leasing of federal oil and gas is affected by other acts such as National Environmental Policy Act of 1969, the Wilderness Act of 1964, National Historic Preservation Act of 1966, the Endangered Species Act of 1973, Federal Land Policy and Management Act of 1976, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987. Regulations governing federal oil and gas leasing are contained in 43 CFR Part 3100 with additional requirements and clarification found in Onshore Operating Orders and Washington office manuals, handbooks and instruction memorandums.

The 1920 *Mineral Leasing Act* provides that all public lands are open to oil and gas leasing unless a specific order has been issued to close an area. Leasing procedures for oil, conventional gas, and coal bed natural gas are the same.

The lease grants the right to explore, extract, remove, and dispose of oil and gas deposits that may be found in the leased lands. The lessee may exercise the rights conveyed by the lease subject to the lease terms and attached stipulations, if any.

Lease rights may be subject to lease stipulations and permit approval requirements. Stipulations and permit requirements describe how lease rights are modified. Lease constraints or requirements may also be applied to applications for permit to drill on existing leases provided the constraints or requirements are within the authority reserved by the terms and conditions of the lease. The stipulations and conditions of approval must be in accordance with laws, regulations, and lease terms. The lease stipulations and permit conditions of approval allow for management of federal oil and gas resources in concert with other resources and land uses. The BLM planning process is the mechanism used to evaluate and determine where and how federal oil and gas resources will be made available for leasing. In areas where oil and gas development may conflict with other resources, the areas may be closed to leasing. Areas where oil and gas development could coexist with other land uses or resources will be open to leasing. Leases in these areas will be issued with standard lease terms or with added stipulations based upon decisions in the land use document. Added stipulations are a part of the lease only when environmental and planning records demonstrate the necessity for the stipulations (modifications of the lease).

Currently, leases are issued as either competitive leases or noncompetitive leases with 10-year terms.

Competitive leases will be sold to the highest qualified bidder at oral auctions that are held at least quarterly. Tracts that receive no bid at the sale are available for the filing of noncompetitive offers for two years following the sale. All offers filed the day after the sale (referred to as day-after-the-sale filings) are considered simultaneously filed. This means that if there is more than one offer filed for a specific parcel the day after the sale, a drawing must be held to determine the priority on multiple offers. Noncompetitive offers filed after that time are on a first-come first-served basis. If there are no offers filed for a parcel for the two-year period after the sale, the lands must be nominated again for competitive leasing. Rental payments for these leases will be \$1.50 per acre for the first 5 years and \$2.00 per acre thereafter until production is established. If the lessee establishes hydrocarbon production, the leases can be held for as long as oil or gas is produced. The royalty rate for leases issued following the 1987 Oil and Gas Leasing Reform Act is 12-1/2 percent one-half of which is returned to the State of Montana on public domain lands (not acquired lands). Minimum royalty is the same amount as the rental. Future interest leases are available for entire or fractional mineral estates that have not reverted to federal ownership. These are minerals that are reserved by the grantor for a specific period of time in warranty deeds to the United States. Any future interest leases may be obtained only through the competitive bidding process and are made effective the date of vesting of the minerals with the United States.

## Resource Management Plan Maintenance

New information may lead to changes in existing resource inventories. New use areas and resource locations may be identified or use areas and resource locations that are no longer valid may be identified. These resources usually cover small areas requiring the same protection or mitigation as identified in this plan. Identification of new areas or removal of old areas that no longer have those resource values will result in the use of the same lease stipulation identified in this plan. These areas will be added to the existing data inventory without a plan amendment. In cases where the changes constitute a change in resource allocation outside the scope of this plan, a plan amendment would be required.

## Lease Stipulations

Certain resources in the planning area require protection from impacts associated with oil and gas activities. The specific resource and the method of protection are contained in lease stipulations. Lease stipulations are usually no surface occupancy, controlled surface use, or timing limitation. A notice may also be included with a lease to provide guidance regarding resources or land uses. While the actual wording of the stipulations may be adjusted at the time of leasing, the protection standards described will be maintained.

## Controlled Surface Use

Use or occupancy is allowed (unless restricted by another stipulation), but identified resource values require special operational constraints that may modify the lease rights. Controlled surface use is used for operating guidance, not as a substitute for the no surface occupancy or timing stipulations.

## No Surface Occupancy (NSO)

Use or occupancy of the land surface for fluid mineral exploration or development is prohibited in order to protect identified resource values. The no surface occupancy stipulation includes stipulations which may have been worded as No Surface Use and Occupancy,” “No Surface Disturbance,” “Conditional No Surface Occupancy,” and “Surface Disturbance or Occupancy Restriction (by location).”

## Timing Limitation (Seasonal Restriction)

Prohibits surface use during specified times to protect identified resource values. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

## Waivers, Exceptions, Modifications

Lessees must honor lease stipulations when an Application for Permit to Drill or other surface disturbing operations are proposed to explore and develop a lease, unless the BLM grants a waiver, exception, or modification to a lease stipulation. This RMP establishes the guidelines by which future waivers, exceptions, or modifications are granted within the Butte Field Office. Substantial modification or waiver is subsequent to lease issuance is subject to public review for at least a 30-day period.

**Exception:** A case-by case exemption from a lease stipulation. The stipulation continues to apply to all other sites within the leasehold to which the restrictive criteria apply.

**Modification:** Fundamental changes to the provisions of a lease stipulation, either temporarily or for the term of the lease. Therefore, a modification may include an exemption from or alteration to a stipulated requirement. Depending on the specific modification, the stipulation may or may not apply to all other sites within the leasehold to which the restrictive criteria apply.

**Waiver:** Permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold.

## PERMITTING

A federal lessee or operator is governed by procedures set forth in the Code of Federal Regulations at 43 CFR Part 3160, Onshore Oil and Gas Order No. 1, “Approval of Operations on Onshore Federal and Indian Oil I and Gas Leases,” issued under 43 Code of Federal Regulations (CFR) 3164 and other orders and notices.

The lessee may conduct lease operations after lease issuance. However, proposed drilling and associated activities must be approved in advance before beginning operations. Therefore, before beginning construction or the drilling of a well, the lessee or operator must file an Application for Permit to Drill (APD) with the BLM Great Falls Oil and Gas Field Station. A copy of the application will be posted in the Field Station and Butte Field Office, and if applicable, in the office of the Surface Management Agency (SMA) for a minimum of 30 days for review by the public. After 30 days, the application can be approved in accordance with (a) lease stipulations, (b) Onshore Oil and Gas Orders, and (c) Onshore Oil and Gas regulations (43 CFR Part 3160) if it is administratively and technically complete.

Evidence of bond coverage for lease operations must be submitted with the application. Bond amount must not be less than a \$10,000.00 lease bond, a \$25,000.00 statewide bond or a \$150,000.00 nationwide bond.

Pre-drill on-site inspections will be conducted for all wells. The inspection makes possible selection of the most feasible well site and access road from environmental, geological, and engineering points of view. The purpose of the field inspection is to evaluate the operator's plan, assess the situation for possible impacts, and to formulate resource protection stipulations. Surface use and reclamation requirements are developed during the on-site inspection that is usually conducted within 15 days after receipt of the Notice of Staking (NOS) or APD. For operations proposed on privately-owned surface, if the operator after a good-faith effort is unable to reach an agreement with the private surface owner, the operator must post a bond to cover loss of crops and damages to tangible improvements prior to approval of the APD.

Normally, site-specific mitigations in the form of conditions of approval are added to the APD for protection of surface and subsurface (including groundwater) resource values in the vicinity of the proposed activity. The BLM is responsible for preparing environmental documentation necessary to satisfy the National Environmental Policy Act (NEPA) requirements and provide any mitigation measures needed to protect the affected resource values.

Conditions of approval implement the lease stipulations and are part of the permit when environmental and field reviews demonstrate the necessity for operating constraints or requirements. A surface restoration plan is

part of an approved permit, either an APD or Sundry Notice that includes other surface-disturbing activities. The authorized officer will act on the application in one of two ways:

Within 30 days after the operator has submitted a complete application including incorporating any changes that resulted from the onsite inspection the BLM will:

- (1) approve the application subject to reasonable conditions of approval if the requirements of the National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), Endangered Species Act (ESA), or other applicable law have been completed and, if on FS lands, FS has approved the Surface Use Plan of Operations; or
- (2) notify the operator that it is deferring action on the permit. The notice of deferral must specify:
  - (a) any action the operator could take that would enable BLM to issue a final decision on the application, with FS concurrence if appropriate. Actions may include but are not limited to; assistance with data gathering or assistance with preparation of analyses and documents;
  - (b) and if necessary, a list of actions that BLM or the FS, if appropriate, need to take, including completing requirements of NEPA or other applicable law and a schedule for completing these actions.

The operator has 2 years from the date of the notice of deferral to take the action specified in the notice. If all analyses required by NEPA, NHPA, ESA and other applicable laws have been prepared, BLM and with FS concurrence, if appropriate, shall make a decision on the permit within 10 days of receiving a report from the operator addressing all of the issues or actions specified in the deferral notice and certifying that all required actions have been taken. If the operator has not completed the actions specified in the notice, BLM may deny the permit at any time later than 2 years from the operator's receipt of the deferral notice."

For drilling operations on lands with state or private mineral ownership, the lessee must meet the requirements of the mineral owner and the state regulatory agency. The BLM does not have jurisdiction over nonfederal minerals; however, the BLM has surface management responsibility in situations of BLM surface over nonfederal mineral ownership.

When final approval is given by the BLM, the operator may begin construction and drilling operations. Approval of an APD is valid for one year. If construction does not begin within one year, the permit must be reviewed prior to approving another APD.

A Sundry Notice is used to approve other surface and subsurface lease operations. When a well is no longer useful, the well is plugged and the surface reclaimed. A Sundry Notice is also used to approve well plugging and

reclamation operations, although verbal approval for plugging may be given for a well that was drilled but not completed for production.

The period of bond liability is terminated after all wells covered by the bond are properly plugged and the surface reclaimed. The lands may then become available for future leasing.

## **APPLICATION FOR PERMIT TO DRILL**

Applications for Permit to Drill are approved for the Butte Field Office by the supervisor of the Great Falls Oil and Gas Field Station. The approved APD includes Conditions of Approval, and Informational Notices that cite the regulatory requirements from the Code of Federal Regulations, Onshore Operating Orders and other guidance.

## **CONDITIONS OF APPROVAL**

Conditions of approval are mitigation measures that implement restrictions in light of site-specific conditions. General guidance for conditions of approval and surface operating standards is found in the BLM and USFS brochure entitled "Surface Operating Standards for Oil and Gas Exploration and Development" (USDI, BLM1989c) and BLM Manual 9113 entitled "Roads". The BLM commonly applies best management practices when approving APDs. The sources of many of these may be found in RMP Appendix D at page 4.

The following mitigation measures may be applied to approved permits to drill as conditions of approval. The listing is not all-inclusive, but presents some possible conditions of approval that may be used in the planning area. The wording of the condition of approval may be modified or additional conditions of approval may be developed to address specific conditions.

In addition to the best management practices identified in Appendix D, the BLM will also develop site-specific practices on a case-by-case basis as needed.

## **Surface Conditions**

- a) The access road on the BLM surface will not be bladed unless prior BLM approval is obtained.
- b) The operator will be responsible for weed control on the access road, well location, and pipeline for the life of the well.
- c) The operator will clean the undercarriage of all rigs prior to entering onto the leasehold to reduce the chances for noxious weed infestations.
- d) Topsoil is to be removed and stockpiled. Operator will be required to cover the topsoil pile to prevent the loss of topsoil to wind erosion. Operator must cover the topsoil with a biodegradable mesh fabric that allows water and air to circulate through the

- topsoil. Operator cannot cover the topsoil with any type of impermeable fabric. Operator will be responsible for weed control on the topsoil stockpile.
- e) Avoid constructing reserve pits in natural watercourses or areas of shallow groundwater. Water courses include lake beds, gullies, draws, streambeds, washes, arroyos, or channels that are delineated on a 1:24,000 USGS quadrangle map or have a hydrologic connection to streams, rivers, or lakes. The reserve pit should normally be located entirely in cut material. The preferred method of reserve pit construction on steeply sloping sites is to locate the pit on the drill pad next to the high wall. The pits are constructed totally in cut at such locations. If this is not possible, at least 50 percent of the reserve pit should be constructed below original ground level to help prevent failure of the pit dike. Fill dikes should be properly compacted in lifts. The necessary degree of compaction depends on soil texture and moisture content. The pit should be designed to contain all anticipated drilling muds, cuttings, fracture fluids, and precipitation while maintaining at least 2 feet of freeboard. Pits improperly constructed on slopes or poor soil types may leak along the plane between the natural ground level and the fill. There is a significant potential for pit failure in these situations. When constructing dikes for pits or impoundments with fill embankment, a keyway or core trench should be excavated to a minimum depth of 2 to 3 feet below the original ground level. The core of the embankment can then be constructed with compacted, water-impervious material.
- f) Containment structures sufficiently impervious to prevent a discharge to waters of the US, such as containment dikes, containment walls, drip pans, or equivalent protection actions are to be constructed and maintained around all qualifying bulk oil storage facilities, including tank batteries, consistent with the Environmental Protection Agency's Spill Prevention, Control, and Countermeasure (SPCC) regulation (40 CFR 112). The containment structure must have sufficient volume to contain, at a minimum, the content of the largest storage tank containing liquid hydrocarbons within the facility/battery and sufficient freeboard to contain precipitation, unless more stringent protective requirements are deemed necessary by the authorized officer. Containment dikes are not to be constructed with topsoil or coarse, insufficiently impervious spoil material. Containment is strongly suggested for produced water tanks. Chemicals should be placed within secondary containment and stored so that the containers are not in contact with soil or standing water and product and hazard labels are not exposed to weathering.
- g) Rehabilitation of upland sites following disturbance would use the plant species listed in **Table 7** for seeding. The species used for rehabilitation would vary depending on the adjacent habitat conditions, site potential, soils, and precipitation. Species not in the following list could be added if site conditions warrant, species availability changes or if there are large acreages are involved.
- h) All permanent structures will be painted the neutral color of Sand Beige (5Y 6/3), Desert Brown (10YR 6/3), Carlsbad Canyon (2.5Y 6/2) or Slate Gray (5Y 6/1) as displayed in the Standard Environmental Color chart (available at the BLM office) or other acceptable color approved by the authorized officer to blend in with the surrounding landscape.
- i) If the well is a dry hole, Operator will be required to fence the entire disturbed area of the location to allow the seedlings and vegetation to re-establish. This fencing must be stock tight and must remain in place until the BLM requests otherwise.
- j) The Operator will be responsible for control of noxious weeds occurring as a result of lease operations. The Surface Management Agency will be responsible for approval of weed control programs.
- k) Prior to the use of herbicides on public land, the applicant will have to obtain from the BLM authorized officer written approval of a plan showing the type and quantity of material to be used, weed(s) to be controlled, method of application, location of storage and disposal of containers and any other pertinent information deemed necessary by the authorized officer. Operators must monitor disturbed areas annually from June through August for the presence of noxious weeds. Monitoring must begin prior to disturbance.
- l) Within the Distribution Zone of grizzly bears, food storage regulations will be followed to minimize bear-human conflicts. Proper food storage is essential to successful human-bear management. "Food" includes actual food, trash, recyclables, toiletries, cosmetics, first aid kits, pet food, sunscreen, baby wipes, scented tissue, beverage cans and bottles, canned food, mosquito repellent, tobacco products, and any related items with a scent. All food items, garbage, beverages, coolers, stoves, grills, cooking utensils, food containers, and pet food not in immediate use (day or night) must be stored in Bear Resistant Containers (BRC), stored in a closed vehicle constructed of solid, nonpliable material or be hung from food poles where provided or limbs of trees. Food items must be hung 10 feet clear of the ground at all points and 4 feet horizontally from any supporting tree or pole. Camps and job sites must be clean at all times. No garbage will be burned or buried. All garbage will be removed from the site.

<b>Table 7 Rehabilitation Species List</b>			
<b>Common Name</b>	<b>Scientific Name</b>	<b>4 Code</b>	<b>6 Code</b>
<b>12 to 14 inch precipitation zone</b>			
Western Wheatgrass	<i>Pascopyrum smithii</i>	PASM	PASSMI
Bluebunch Wheatgrass	<i>Pseudoroegneria spicata</i>	PSSP6	PSESPI
Thickspike Wheatgrass	<i>Elymus macrourus</i>	ELMA7	ARGDAS
Slender Wheatgrass	<i>Elymus trachycaulus</i>	ELTR7	ELYTRA
Green Needlegrass	<i>Nassella viridula</i>	NAVI4	STIVIR
Needle And Thread	<i>Hesperostipa comata</i>	HECO26	STICOM
Blue Flax	<i>Linum perenne</i>	LIPE2	LINPER
Scarlet Globemallow	<i>Sphaeralcea coccinea</i>	SPCO	SPHCOC
Silky Lupine	<i>Lupinus sericeus</i>	LESE4	LUPSER
Wyoming Big Sage	<i>Artemisia tridentate</i>	ARTRW8	ARTTRIW
Woods' Rose	<i>Rosa woodsii</i>	ROWO	ROSWOO
<b>15 to 19 inch precipitation zone</b>			
Basin Wildrye	<i>Leymus cinereus</i>	LECI4	LEYCIN
Bluebunch Wheatgrass	<i>Pseudoroegneria spicata</i>	PSSP6	PSESPI
Slender Wheatgrass	<i>Elymus trachycaulus</i>	ELTR7	ELYTRA
Idaho Fescue	<i>Festuca idahoensis</i>	FEID	FESIDA
Sheep Fescue	<i>Festuca ovina</i>	FEOV	FESIVI
Sandberg Bluegrass	<i>Poa secunda</i>	POSE	POASEC
Blue Flax	<i>Linum perenne</i>	LIPE2	LINPER
Silky Lupine	<i>Lupinus sericeus</i>	DESE4	LUPSER
Wyoming Big Sage	<i>Artemisia tridentate</i>	ARTRV	ARTTRIV
Woods' Rose	<i>Rosa woodsii</i>	ROWO	ROSWOO

- m) Operator road use activities on BLM lands must conform to existing travel plans.

### Downhole Conditions

- Surface casing shall have centralizers on each of the bottom three joints and shall be cemented back to surface.
- BOP system shall be consistent with Onshore Oil and Gas Order No. 2, 2M system.
- The operator shall obtain verbal approval prior to initiating side-tracking operations. At the time of approval, the operator must identify the proposed azimuth, kick-off point, inclination rate (angle build rate), and the estimated closure or horizontal length to be drilled. All wellbore paths, i.e. different orientations of bottom hole locations, require prior approval.
- The operator shall have sufficient weighting materials and loss circulation materials on location

in the event of a pressure kick or in the event of loss circulation.

### Informational Notice

- Approval of this APD does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease, which would entitle the applicant to conduct operations thereon.
- The lessee shall comply with applicable laws and regulation; with the lease terms, Onshore Oil and Gas Orders; NTL's; and with other orders and instructions of the authorized officer.
- A complete copy of the approved APD must be on the well site and available for reference during the construction and drilling phase.
- Any deviation from the terms of this APD requires prior approval.
- This drilling permit is valid for either 1 year from the approval date or until lease expiration, whichever occurs first.

- f) Each drilling, producing, or abandoned well shall be identified with the operator's name, the lease serial number, the well number, and the surveyed description of the well (footages or the quarter section, the section, township, and range). All markings must be legible, and in a conspicuous place.

### Notification Requirements

- a) Notify this office at least 12 hours before beginning dirt work\*.
- b) Notify this office verbally at least 6 hours before the well is spudded.
- c) Notify this office verbally at least 6 hours prior to running/cementing casing.
- d) Notify this office verbally at least 6 hours prior to conducting BOP tests.
- e) Notify this office at least 6 hours prior to plugging for verbal plugging orders.
- f) BLM Representative – Great Falls Field Station Office Telephone No. (406) 791-7700:
- g) After hours and weekend contacts are:
- i. Petroleum Engineer Technician
  - ii. Petroleum Engineer
  - iii. Environmental Specialist
  - iv. Field Station Supervisor

### Plugging Requirements

- a) Prior approval for abandonment must be obtained. Initial approval for abandonment during drilling operations may be verbal but must be followed by written notification on Form 3160-5, in triplicate.
- b) Upon completion of the approved plugging, the operator will cut the casing off four feet below reclaimed ground level and a ¼" x 12" x 12" plate (with a ⅛" weep hole) shall be welded onto a fitting to be screwed into a collar either welded or screwed to the production casing. **The standard aboveground dry hole marker is accordance with 43 CFR 3162.6(d) has been waived by the Great Falls Field Station.** Pits must be fenced until dry or pumped and then filled in and recontoured unless otherwise approved by the Field Station Supervisor.
- c) The following minimum information shall be permanently placed on the plate: "Fed" or "Ind" as applicable; "Lease Number, Operator, Well Number, and Location by quarter/quarter, Section, Township, and Range."

### Reports and Notifications

- a) All submitted information not marked "CONFIDENTIAL INFORMATION" is subject to public disclosure in accordance with 43 CFR 3100.4.

- b) Production Startup Notification is required not later than the 5<sup>th</sup> business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed.

### Hazardous Materials

- a) Operators and their contractors are to ensure all production, use, storage, transport, and disposal of hazardous materials resulting from the proposed project is in accordance with all applicable Federal, State and local laws, regulations and guidelines, existing or hereafter enacted or promulgated that effect the management of hazardous material, as defined in this paragraph. Hazardous material means any substance, pollutant, or contaminant listed as a hazardous substance under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended, 42 USC 9601 et seq., and its regulations (found at 40 CFR 302). The definition of hazardous substances under CERCLA includes "hazardous waste" defined in the Resource Conservation and Recovery Act (RCRA) of 1976, as amended, 42 USC 6901 et seq., and its regulations. The term also includes any extremely hazardous substances defined by 40 CFR 355 and any nuclear or byproduct material defined by the Atomic Energy Act of 1954, as amended, 42 USC 2011 ET seq. The term does not include petroleum, including crude oil or any fraction thereof not otherwise listed or designated as a hazardous substance under CERCLA section 101 (14), 42 USC 9601 (14), or natural gas.
- b) Only drilling mud, drilling fluids, cuttings, native soils, cementing materials and/or approved pit solidifying materials will be placed in the reserve or working pits.
- c) Nonexempt wastes will not be mixed with exempt wastes.

### Environmental Obligations and Disposal of Produced Water

- a) The Operator is required to take all necessary steps to prevent any death of a migratory bird in pits or open vessels associated with the drilling, testing, completion, or production of this well. The death of any migratory bird found in such a pit or open vessel is a violation of the Migratory Bird Treaty Act and is considered a criminal act. Any deaths of migratory birds attributable to pits or open vessels associated with drilling, testing, completing, or production operations must be reported to this office

and the United States Fish and Wildlife Service within 24 hours.

- b) The BLM may require that the pit be designed or the open vessel be covered to deter the entry of birds in any facility associated with drilling, testing, completing, or production of this well. Fencing, screening, and netting of pits may be required as a means to deter bird entry. These conditions would most likely be imposed to prevent the entry of migratory birds if oil is left in pits or open vessels after the cessation of drilling or completion operations, if water disposal pits consistently receive oil, or if pits or open vessels are used repeatedly for emergency situations which result in the accumulation of oil.
- c) Voluntary pit fencing, screening, and netting, or sealing vessels is encouraged thus avoiding potential instances that may result in the death of a migratory bird.
- d) With BLM approval, water produced from newly completed wells may be temporarily disposed of into unlined pits for up to 90 days. During this initial period, application for the permanent disposal method must be made in accordance with Onshore Order No. 7.

### **Paleontological/Cultural Stipulations**

Paleontological and archaeological field checks by BLM personnel or other authorized personnel will occur prior to disturbance as deemed appropriate by the BLM. A BLM-approved archaeologist or paleontologist will conduct monitoring during surface-disturbing activities. Paleontological or cultural resource sites will be avoided or mitigated as necessary prior to disturbance. Any cultural or paleontological resource discovered by an operator or any person working on his/her behalf will be reported immediately to the BLM, and all operations that may further disturb such resources will be suspended until written authorization to proceed is issued by the BLM authorizing officer. An evaluation of the discovery will be made by the BLM to determine appropriate actions to prevent the loss of significant resources.

## **CONSTRUCTION**

Construction of the access road and the well site is necessary before drilling operations begin. The extent of surface disturbance necessary for construction depends on the terrain, depth of the well, drill rig size, circulating system, and safety standards.

The depth of the drill test determines the size of drill rig needed, and therefore, the size of the work area necessary, the need for all-weather roads, water requirements, and other needs. The terrain influences the construction problems and the amount of surface area to be disturbed. Reserve pit size may vary because of well depth, drill rig size, or circulating system.

Access roads to well sites in the planning area usually consist of running surfaces 14 to 24 feet wide that are ditched on one or both sides. Many of the roads constructed will follow existing roads or trails. New roads might be necessary because existing roads are not at an acceptable standard. For example, a road may be too steep so that realignment is necessary.

Roads can be permanent or temporary, depending on the success of the well. The initial construction can be for a temporary road; however, it is designed so that it can become permanent if the well produces. Not all temporary roads constructed are immediately rehabilitated when the drilling stops. A temporary road is often used as access to other drill sites. The main roads and temporary roads require graveling to be maintained as all-weather roads. This is especially important in the spring. Access roads may be required to cross public lands to a well site located on private or state lands. The portion of the access road on public land would require a BLM right-of-way.

The amount of level surface required for safely assembling and operating a drilling rig varies with the type of rig, but averages 300 feet by 400 feet. Approximately 3-1/2 acres would be impacted by well site construction. The area is cleared of large vegetation, boulders, or debris. Then the topsoil is removed and saved for reclamation. A level area is then constructed for the well site, which includes the reserve pit.

Bulldozers and motor scrapers are typically used to construct the well pad. The well pad is flat (to accommodate the drill rig and support equipment) and large enough to store all the equipment and supplies without restricting safe work areas. The drill rig must be placed on "cut" material rather than on "fill" material to provide a stable foundation for the rig. The degree of cutting and filling depends on terrain; that is, the flatter the site, the less dirt work is required.

Hillside locations are common, and the amount of dirt work varies with the steepness. A typical well pad will require a cut 10 feet deep against the hill and a fill 8 feet high on the outside. It is normal to have more cut than fill to allow for compaction, and any excess material is then stockpiled. Eventually, when the well is plugged and abandoned, excavated material is put back in its original place.

Reserve pits are normally constructed on the well pad. Usually the reserve pit is excavated in "cut" material on the well pad. The reserve pit is designed to hold water, drill cuttings, and used drilling fluids. Generally, reserve pits are rectangular in shape and 8 to 12 feet deep, however, the size and number of pits depends on the depth of the well, circulating system and anticipated down hole problems, such as excess water flows. The reserve pit can be lined with a synthetic liner to contain pit contents and reduce pit seepage. Not all reserve pits are lined; however, BLM can require a synthetic liner

based upon factors such as soils, pit locations, ground water, and drilling mud constituents. The operator can elect to line the reserve pit without that requirement. Pits may be divided into compartments separated by berms for the proper management of derived waste (e.g., drill cuttings, mud, water flows).

An adequate supply of water is required for drilling operations and other uses. During drilling operations, water is continually transported to the rig location. Approximately 1,680,000 gallons of water are required to drill an oil or gas well to the depth of 9,000 feet. The sources of water can be a water well at the drill site or remote sources such as streams, ponds, or wells. The water is transported to the site by truck or pipeline. Pipelines are normally small diameter surface lines. The operator must file for and obtain all necessary permits for water from the state of Montana. On public lands, an operator must have the BLM's permission before surface water can be used.

## **DRILLING OPERATIONS**

Starting to drill is called "spudding in" the well. Initially, drilling proceeds rapidly due to the presence of unconsolidated or shallow, poorly consolidated rock formations. Drilling is accomplished by rotating special bits under pressure at the end of drill pipe (string) extended down the hole as it advances. While drilling, the rig derrick and associated hoisting equipment bear most of the drill pipe (string) weight. The weight on the bit is generally a small fraction of the total drill string weight. The combination of rotary motion and weight on the bit causes rock to be chipped away at the bottom of the hole.

Drilling fluid or mud is circulated through the drill pipe to the bottom of the hole, through the bit, up the bore of the well, and finally to the surface. When the mud emerges from the hole, it goes through equipment used to screen and remove rock chips and sand-size solids. When the solids have been removed, the mud is placed into holding tanks and from the tanks it is pumped back into the well. The mud is maintained at a specific weight and viscosity to cool the bit, seal off any porous zones (protect aquifers or prevent damage to producing zone productivity), subsurface pressure control, lubrication of the drill string, clean the bottom of the hole, and bring the rock chips to the surface.

There are three common types of drilling fluids: water-based, oil-based, and synthetic. Water-based muds are the most common and are largely made up of water and bentonite, clay that has special properties used to maintain proper viscosity and other properties over a wide range of drilling conditions. Oil-based mud is used for subsurface conditions where water may react with shale and cause caving and sloughing of the sides of the well bore. Synthetic drilling fluids are used for special conditions and have become more common in recent

years. They are composed of organic polymers or other chemicals and are often designed to be environmentally benign. Additives are used to maintain the drilling mud properties for specific conditions that may be encountered during drilling.

As drilling progresses for a vertical well, pipe or casing is placed as a liner in the hole. Casing consists of steel pipe that is placed into the hole to prevent the collapse of the hole, to protect aquifers, and to isolate producing zones from other formations. Several strings of casing, that have different purposes, may be placed into the well. The first string of pipe is the conductor pipe, which stabilizes the hole near the surface. The second string of pipe placed in the hole is for surface casing, which is set deep enough to reach a competent rock below the deepest usable freshwater aquifer.

The surface casing is set and cemented in the hole by pumping cement between the casing and the well bore wall. Surface casing acts as a safety device to protect freshwater zones from drilling fluid contamination. To prevent the well from "blowing-out" in the event the drill bit hits a high-pressure zone, blowout preventers are mounted on top of the surface casing. If high-pressure zones are encountered that cannot be controlled with weighting using mud additives (drilling fluids are the first line of defense against a blowout), the blowout preventers can be closed through a system of hydraulically activated valves and manifolds to effectively seal the well and prevent the uncontrolled flow of fluids.

After the surface casing is set, a smaller drill bit that fits inside the surface casing is installed and drilling resumes. Depending on well conditions, additional strings of casing called intermediate casing may be installed and cemented into place. Conditions resulting in the need for intermediate casing include freshwater zones and sloughing formation zones. Casing prevents the flow of freshwater into the wellbore, and conversely prevents drilling fluids from infiltrating porous formations with low internal pressures. Casing also prevents mixing of waters from different formations (interformational mixing) where water within the formations is of differing quality.

All cementing operation plans are reviewed to assure cement is placed at the appropriate depths and a sufficient quantity is utilized to effectively seal all freshwater-bearing formations from contamination by interformational mixing or migration of fluids.

Drilling operations are continuous, 24 hours a day, 7 days a week. There are three 8-hour or two 12-hour shifts a day. Pickups or cars are used for workers' transportation to and from the location.

If no oil or gas is encountered, the well is called a "dry hole" and it is plugged with cement and abandoned in accordance with state and federal requirements. The drill site and access roads are rehabilitated according to

stipulations and conditions attached to the approved APD and the drilling equipment is moved to another location.

If the well is a producer, casing is set and cemented in place.

Directional drilling may be used where the drill site cannot be located directly over the drilling target. There are limits to both the degree that the well bore can be deviated from the vertical and the horizontal distance the well can be drilled away from the well site.

Horizontal wells are drilled similarly to directional wells, except that the bottomhole location of the well is not a single point, but rather a lateral horizontal section. They are drilled to increase the recovery oil and gas reserves from vertically fractured reservoirs, or reservoirs with directional permeability.

## ENVIRONMENT AND SAFETY

During drilling and production operations for any well the BLM will enforce the provisions of the regulations, Onshore Oil and Gas Operating Orders, and Notice to Lessees NTL-MSO-1-92, Report of Undesirable Events, to ensure operations are carried in a manner that protects the mineral resources, other natural resources, and environmental quality. Regulations at 43 CFR § 3162.5 require that the operator exercise due care and diligence to assure that leasehold operations do not result in undue damage to surface or subsurface resources or surface improvements. All produced water must be disposed of by methods approved by the BLM. Upon completion of operations the operator shall reclaim the surface in a manner approved of by the BLM. All spills or leakages of oil, gas, produced water, toxic liquids, blowouts, fires, personal injuries, and fatalities must be reported by the operator. The operator is required to exercise care in taking measures approved by the BLM to control and remove pollutants and extinguish fires. An operator's compliance with the regulations at 43 CFR § 3162.5 does not relieve him of the obligation to comply with any other law or regulations. Finally, the regulations authorize the BLM to require an operator to file a contingency plan describing procedures to be implemented to protect life, property, and the environment.

## PRODUCTION AND DEVELOPMENT

### Production

Production begins when a well yields oil or gas in commercial quantities. If formation pressure is sufficient to raise oil to the surface, the well is completed as a flowing well. A pumping unit is installed if the formation pressure is not sufficient to bring the oil to the surface.

When the well is completed as a free-flowing well, an assembly of valves and special connections known as a "Christmas tree" (so called because of its many branch-like fittings) is installed on top of the casing to regulate the flow of the well. Later, when the natural pressure declines, the Christmas tree can give way to a simple wellhead arrangement of valves and a pumping unit to lift the oil artificially. Many pumping units are "beam" style pumps that are powered by electric motors or gasoline engines. Most gas wells produce by natural flow and do not require pumping. Surface facilities at a flowing well are usually in a small area containing a gas well Christmas tree, a dehydrator, a produced water pit, and a meter house. Separators, condensate tanks, and compressors may be included. Some gas wells require continuous water pumping as water entering the well chokes off the gas flow.

### Development

New field development may be analyzed under NEPA by means of an environmental assessment (EA) or environmental impact statement (EIS) usually after the second or third confirmation well is drilled. The operator should then have an idea of the extent of drilling and disturbance required to extract and produce the oil and gas. When an oil or gas discovery is made, a well spacing pattern must be established before development drilling begins.

Development can take years and include from one or two wells to more than a hundred wells per field. However, the reasonably foreseeable development scenario for this planning document should only forecasts two additional wells per field. Roads to producing wells are upgraded to all-weather roads as necessary. Pipelines, electrical transmission lines, separators, dehydrators, sump pits, and compressor stations soon follow. Sometimes oil and gas processing facilities are built in or adjacent to the field.

### Further Seismic Testing

More detailed seismic work can be done to achieve better definition of the petroleum reservoir. Diagonal seismic lines can be required to tie the previous seismic work to the discovery well. The discovery well can be used to conduct studies to correct the previous seismic work and provide more accurate subsurface data.

### Spacing Requirements

A well spacing pattern must be established before development drilling begins. Information considered in establishment of a spacing pattern includes data from the discovery well on porosity, permeability, pressure, composition, and depth of formations in the reservoir; well production rates and type (predominantly oil or gas); and the economic effect of the proposed spacing on recovery. The state of Montana establishes well spacing patterns for both exploratory and development wells

which the BLM generally adopts. The state specifies the minimum distance from lease lines or government survey lines for the bottom hole location of the well bore depending upon depth of the well. The spacing regulations determine the acres assigned to each well. Spacing unit size is established to provide for the most efficient and economic recovery of oil or gas from a reservoir. Normal well spacing ranges from 40 acres to 640 acres (**Figures A-2 and A-3**). Wells deeper than 11,000 feet can be no closer than 1,650 feet to other producing wells below 11,000 feet. Only one producing well per formation is allowed in each 40, 80, 160, 320, and 640-acre unit.

### **Drilling of Development Wells**

The procedures used in drilling development wells are the same as those used for wildcat wells, but usually with less subsurface sampling, testing, and evaluation. The rate at which development wells are drilled in a field depends on factors such as whether the field is developed on a lease basis or unitized basis, the probability of profitable production, the availability of drilling equipment, lease requirements, and the degree to which limits of the field are known. Some fields go through several development phases, the first resulting from the original discovery and others from later discovery. A field can be considered fully developed and produce for several years, and then a well may be drilled to a deeper or shallower pay zone. Discovery of a new pay zone in an existing field is a “pool” discovery (as distinguished from a new field discovery). A pool discovery may lead to the drilling of additional wells, often from the same drilling pad as existing wells.

### **Inspections**

Geophysical operations and lease operations are inspected to determine compliance with approved permits, to resolve conflicts or correct problems and to determine effectiveness and need of lease stipulations. All inspections are documented. Operators are required to correct problems or violations.

### **Surface Requirements**

Field development activities that cause surface disturbance include access roads, well sites, production facility sites, flow line and utility line routes and waste disposal sites. Surface uses in a gas field will be less than in an oil field, because gas wells are usually drilled on larger spacing units. The spacing pattern of 640 acres per well, which is common in gas fields, will require only one well per section and might require only 1/2 mile of access roads and pipelines. Production facilities include separation and storage equipment. Separation equipment is required when production includes a combination of oil, gas, or water and storage equipment is required for holding liquids prior to sales.

### **Flow Lines**

Oil and gas are transferred from the well to storage facilities through small diameter (<6 inches) flow lines. Flow lines can be on the surface, buried or elevated. Produced water, gas, or polymerized liquid is transferred from storage facilities to injection wells for secondary recovery.

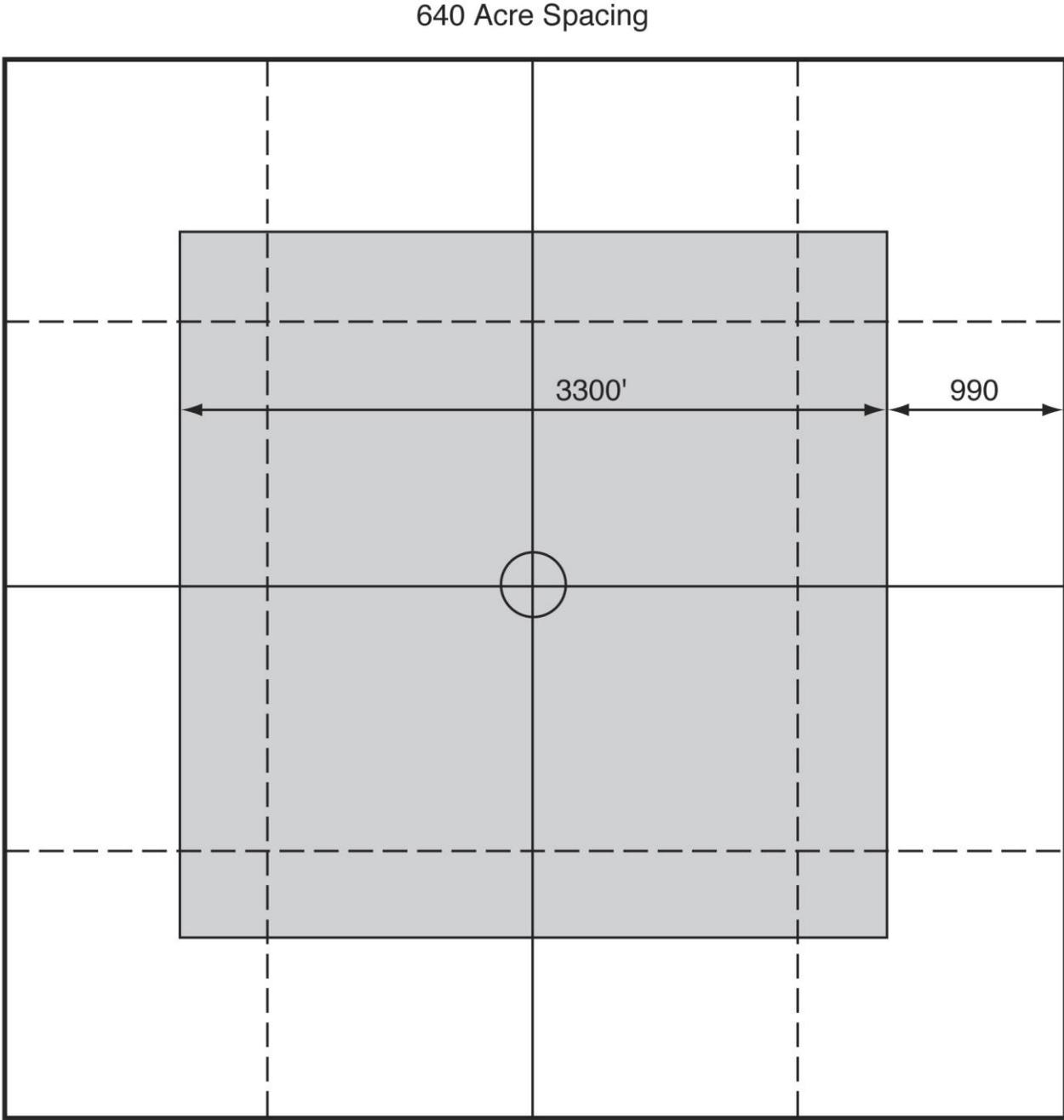
### **Separating, Treating, and Storage**

Any water or gas associated with produced oil is separated from the oil before it is placed in storage tanks. The treating facilities are located at a storage tank battery. Low-pressure petroleum that must be pumped from the well is treated in a single separation. High-pressure, flowing petroleum can require several stages or separation, with a pressure reduction accompanying each stage.

Produced gas is sold when there is sufficient volume, necessary transportation, a market, and it is economical. Generally, if the volume of produced gas is too low for sales, it is used as fuel for well pump engines and heating fuel for the treaters. If the volume of produced gas exceeds fuel requirements on the lease but gas sales are not possible, the gas can be flared or vented into the atmosphere when authorized by permit in accordance with state and federal regulations. When water is produced with the hydrocarbons, it is separated before the gas is removed. In primary operations, where natural pressures or gravity causes the petroleum in the reservoir to flow to the wellbores, the degree of mixing is high enough to require chemical and heat treatment to separate the oil and water. In secondary production, where water injection or other methods are used to force additional petroleum to the wellbore, the oil and water often are not highly emulsified. In this case, the oil and water can be separated by gravity in a tall settling tank. Produced water can be disposed of by injection into the subsurface, surface evaporation or beneficial purposes such as water for livestock or irrigation.

Produced water from oil and gas operations is normally disposed of by subsurface injection or in surface pits. Regardless of the method of disposal, it must be acceptable to the BLM, in accordance with the requirements of Onshore Oil and Gas Order No. 7, titled “Disposal of Produced Water.” Disposal of produced water by injection wells requires permits from the Montana Board of Oil and Gas Conservation. When produced water is disposed underground, it is introduced or injected under pressure into a subsurface horizon containing water of equal or poorer quality. Produced water may be injected into the producing zone from which it originated to stimulate oil production. Dry holes or depleted wells are commonly converted for saltwater disposal and occasionally new wells are drilled for this purpose. The law and regulations require that all injection wells be permitted under the Underground Injection Control program.

Figure A-2. Gas Well Spacing



SOURCE: Montana Oil & Gas Commission

 Area in which well should be drilled

Well  
Depth  
(feet)  

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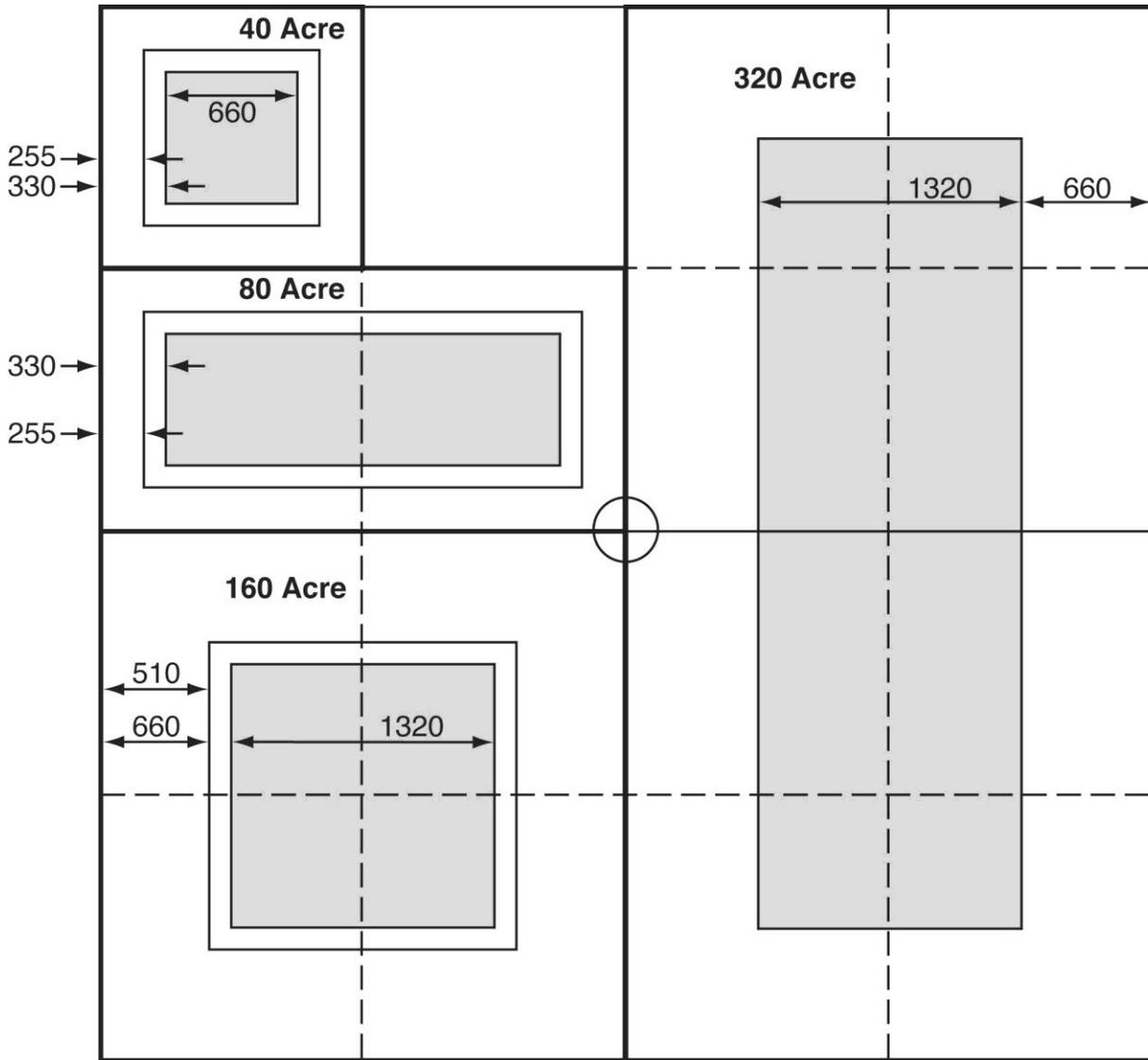
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Minimum Well  
Distance  
(feet)  

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990

Figure A-3. Oil Well Spacing



SOURCE: Montana Oil & Gas Commission

 Area in which well should be drilled

Well Depth (feet)	Spacing (acre)	Nearest Boundary (feet)	Topographic Tolerance (feet)	Minimum Well Distance (feet)
0-6,000	40 & 80	330	75	255
6,000 - 11,000	160	660	150	510
11,001 - >	320	660	none	none

For the 320 acre spacing (1,650 well tolerance) and the 80 acre spacing the drilling unit will be delineated either N-S or E-W

Under the Underground Injection Control approval process, the disposal well must be pressure tested to ensure the integrity of the casing. The disposal zone must also be isolated by use of tubing and mechanical plug called a packer. The packer seals off the inside of the casing and only allows the injected water to enter the disposal zone. The tubing and packer are also pressure tested to ensure their integrity. These pressure tests confirm isolation of the disposal zone from possible usable water zones. The oil is transported to storage tanks through flow lines after separation from any water or gas. Storage tanks are usually located on the lease either at the producing well or at a central production facility. The number and size of tanks are dependent upon the type and amount of production on the lease.

## **ABANDONMENT**

When drilling wells are unsuccessful or production wells are no longer useful, the well is plugged, equipment is removed from the well site or production facility site, and the site is abandoned. The well bore is secured by placing cement plugs to isolate hydrocarbon-producing formations from contaminating other mineral or water bearing formations. The site and roads are then restored as near as possible to original contours. Topsoil is replaced and the recontoured areas are seeded. Reclamation of access roads and well sites on privately owned surface is completed according to the surface owner's requirements.

Rehabilitation requirements generally are made a part of the Application for Permit to Drill. Upon completion of abandonment and rehabilitation operations, the lessee or operator notifies the Great Falls Oil and Gas Field Station that the location is ready for inspection. Final abandonment will not be approved until the required surface reclamation work has been completed to the satisfaction of the BLM or surface owner. The period of bond liability for the well site is terminated after approval of final abandonment. Reclamation of the reserve pit is part of the well site reclamation process. Reserve pit reclamation includes removal of fluids to a disposal well or commercial pit and burial of solids in the pit. Solids should not be buried until dry and then covered with a minimum of 6 feet of native soil. Any pit liner may be buried in place. Methods such as solidification or dewatering may be used to help dry the solids.

## **REGULATIONS, LAWS, AND SPECIAL PROCEDURES**

### **UNIT AND COMMUNITIZATION AGREEMENTS**

Unit and communitization agreements can be formed in the interest of conservation and to allow for the orderly development of oil and gas reserves. A unit agreement provides for the recovery of oil and gas from the lands as

a single consolidated entity without regard to separate lease ownerships. An exploratory unit is used for the discovery and development of the field in an orderly and efficient manner. Paying and nonpaying well determinations are made for each well drilled. If the well is nonpaying as defined by the agreement, the production is allocated on a lease basis. If the well is a paying unit well, a participating area is formed and the production is allocated to all interest owners in the participating area based on surface area. A secondary unit is formed after the field has been defined and enhanced recovery techniques are being utilized. Secondary recovery techniques include water injection, natural gas injection, or carbon dioxide injection. Injection is initiated to maintain the reservoir pressure to maintain oil production. The agreement provides for the allocation of production among all the interest owners.

A communitization agreement combines two or more leases (federal, state, or fee) that otherwise could not be independently developed in conformity with established well spacing patterns. The leases within the spacing unit share in the costs and benefits of the well drilled in the spacing unit. Therefore, unit and communitization agreements can lessen the amount of damage to the environment and save dollars by eliminating unnecessary wells, roads, pipelines, and lease equipment.

### **SPLIT ESTATE**

Part of the area included in the planning area contains lands known as split estate lands. These are lands where the surface ownership is different from the mineral ownership. Management of federal oil and gas resources on these lands is somewhat different from management on lands where both surface and mineral ownership is federal. On split estate lands where the surface ownership is private, the BLM places necessary restrictions and requirements on its leases and permit approvals and works in cooperation with the surface owner. BLM has established policies for the management of federal oil and gas resources in accordance with federal laws and regulations.

The BLM does not have the legal authority to regulate how private surface is managed. BLM does have the statutory authority to require measures by lessees to avoid or minimize adverse impacts that may result from federally authorized mineral lease activities. These measures, in the form of lease stipulations or permit conditions of approval, are intended to protect or preserve the privately owned resources and prevent adverse impacts to adjoining lands, not to dictate management to the surface owner. The term split estate can also refer to lands where the surface ownership is federal and the mineral ownership is private. In this situation, BLM is the surface owner, and works in cooperation with the proponent and the state regulatory agency that approves private mineral applications. BLM

has responsibilities in this situation under the previously mentioned statutes; however, BLM does not have the authority to approve or disapprove the mineral owner's actions. The mineral estate owner usually has the right to enter the land and use the surface that is necessary and reasonable for mineral development through either a reserved or an outstanding right contained in the deed.

## ALTERNATIVE A OIL AND GAS STIPULATIONS

### RESOURCE: GRIZZLY BEAR – RECOVERY ZONE

**Stipulation:** Controlled Surface Use. Activities may be relocated, require special design, or require on and off site mitigation measures to prevent impacts to grizzly bear populations and habitat located in the grizzly bear recovery zone.

**Objective:** 1) To ensure that proposed activities do not adversely affect the viability of grizzly bear, operations will be designed, including limiting noise levels and /or located so as to not adversely affect the viability of grizzly bear. 2) To restrict the timing or type of activities on roads, if needed to control human-animal conflicts or disturbances. 3) To require coordination of timing and timing adjustments of activities within grizzly bear recovery zones to avoid or minimize the potential for adverse effects to grizzly bear because of cumulative impacts from oil and gas activities, plus other activities within the area. This stipulation may limit the extent of field development.

**Exception:** An exemption may be granted if the operator demonstrates in a plan of operations that impacts from the proposed action are acceptable or can be adequately mitigated.

**Modification:** None.

**Waiver:** A waiver may be granted if new habitat studies in coordination with MFWP and the USFWS conclude that the area affected by this stipulation is not in grizzly bear occupied habitat.

### RESOURCE: GRIZZLY BEAR DISTRIBUTION ZONE

**Stipulation:** Controlled Surface Use. Activities may be relocated, require special design, or require on and off site mitigation measures to prevent impacts to grizzly bear populations and habitat located in the grizzly bear distribution zone.

**Objective:** 1) To ensure that proposed activities do not adversely affect the viability of grizzly bear, operations will be designed, including limiting noise levels and /or located so as to not adversely affect the viability of grizzly bear. 2) To restrict the timing or type of activities on roads, if needed to control human-animal conflicts or

disturbances. 3) To require coordination of timing and timing adjustments of activities within grizzly bear distribution zones to avoid or minimize the potential for adverse effects to grizzly bear because of cumulative impacts from oil and gas activities, plus other activities within the area. This stipulation may limit the extent of field development.

**Exception:** An exemption may be granted if the operator demonstrates in a plan of operations that impacts from the proposed action are acceptable or can be adequately mitigated.

**Modification:** None.

**Waiver:** A waiver may be granted if new habitat studies in coordination with MFWP and the USFWS conclude that the area affected by this stipulation is not in grizzly bear occupied habitat.

### RESOURCE: GRAY WOLF – FORMER NORTHWEST MONTANA RECOVERY AREA ENDANGERED POPULATION

**Stipulation:** Controlled Surface Use. Activities may be relocated, require special design, or require on and off site mitigation measures to prevent impacts to gray wolf populations and habitat located in the gray wolf former Northwest Montana Recovery Area.

**Objective:** 1) To ensure that proposed activities do not adversely affect the viability of gray wolf, operations will be designed, including limiting noise levels and /or located so as to not adversely affect the viability of gray wolf. 2) To restrict the timing or type of activities on roads, if needed to control human-animal conflicts or disturbances. 3) To require coordination of timing and timing adjustments of activities within the gray wolf former Northwest Montana Recovery Area to avoid or minimize the potential for adverse effects to gray wolf because of cumulative impacts from oil and gas activities, plus other activities within the area. This stipulation may limit the extent of field development.

**Exception:** An exemption may be granted if the operator demonstrates in a plan of operations that impacts from the proposed action are acceptable or can be adequately mitigated.

**Modification:** None.

**Waiver:** A waiver may be granted if new habitat studies in coordination with MFWP and the USFWS conclude that the area affected by this stipulation is not in gray wolf occupied habitat.

### RESOURCE: PRAIRIE DOG TOWNS

**Stipulation:** No Surface Occupancy. Activity is prohibited within the boundary of any prairie dog town or within ¼ mile of prairie dog towns.

**Objective:** To protect habitat for prairie dog towns.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan which demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting prairie dogs.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP and USFWS, determines that the entire leasehold no longer contains prairie dogs.

## **RESOURCE: SAGE GROUSE WINTER/SPRING RANGE**

**Stipulation:** Timing Limitation. No activity from December 1 through May 15. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect sage grouse winter range from disturbance during the winter/spring season, and to facilitate long-term maintenance of wildlife populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer in consultation with Montana Fish, Wildlife and Parks (MFWP) and the U.S. Fish and Wildlife Service (USFWS), if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer contain sage grouse winter/spring range. The dates for the timing restriction may be modified if new information indicates that the December 1 through May 15 dates are not valid for the leasehold.

**Waiver:** This stipulation may be waived if the authorized officer determines that the entire leasehold no longer contains sage grouse winter/spring range, or if in coordination with MFWP and the USFWS, determines that the area is not critical for sage grouse.

## **RESOURCE: SAGE GROUSE STRUTTING GROUNDS (LEKS)**

**Stipulation:** No Surface Occupancy. Activity is prohibited within 500' of sage grouse leks.

**Objective:** To protect sage grouse strutting grounds and leks to maintain regional sage grouse populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan which demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks.

**Waiver:** The stipulation may be waived if the authorized officer, in consultation with MFWP and the USFWS, determines that the entire leasehold can be occupied without adversely affecting sage grouse leks.

## **RESOURCE: SAGE GROUSE BREEDING HABITAT**

**Stipulation:** Timing Limitation. Activity is restricted from March 1 through June 30 in nesting and early brood rearing habitat (defined as within ¼ mile of leks).

This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect sage grouse leks and breeding habitat necessary for long-term maintenance of regional sage grouse populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP and the USFWS, determines that the entire leasehold can be occupied without adversely affecting sage grouse leks or the surrounding breeding habitat.

## **RESOURCE: WILDLIFE MANAGEMENT AREAS**

**Stipulation:** No Lease within the core area. The core area is considered to be any area approximately one mile or more inside the boundary. No Surface Occupancy is permitted in the perimeter area of the game ranges administered by MFWP. The perimeter area constitutes the area between the boundary of the game range extending approximately one mile into the interior of the game range.

**Objective:** To protect MFWP elk winter range necessary for long-term maintenance of regional elk populations and other wildlife values.

**Exception:** An exception to this stipulation may be granted by the authorized officer if, in coordination with MFWP, it is determined that portions of the game range can be occupied without adversely affecting elk winter range use or other wildlife values.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in coordination with MFWP determines that portions of the game range can be occupied without adversely affecting elk winter range use or other wildlife values.

**Waiver:** None.

## **RESOURCE: BIG GAME WINTER/SPRING RANGE**

**Stipulation:** Timing Limitation. No activity from December 1 through May 15 within winter range for wildlife. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect mule deer, elk, antelope, and moose winter/spring range from disturbance during the winter/ spring season, and to facilitate long-term maintenance of wildlife populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer in consultation with MFWP, if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in consultation with MFWP, determines that portions of the area no longer contain wildlife winter/spring range. The dates for the timing restriction may be modified if new wildlife use information indicates that the December 1 through May 15 dates are not valid for the leasehold.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP, determines that the entire leasehold no longer contains winter/spring range for wildlife.

## **RESOURCE: ELK CALVING/BIG GAME BIRTHING AREAS**

**Stipulation:** Timing Limitation. Activity is prohibited from May 1 through June 30 in big game birthing areas. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect mule deer, elk, antelope, and moose birthing areas from disturbance and facilitate long-term maintenance of wildlife populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer contains birthing habitat for big game species. The dates for the timing restriction may be modified if new wildlife use information indicates that the dates are not valid for the leasehold.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP, determines that the entire leasehold no longer contains big game birthing areas.

## **RESOURCE: BIGHORN SHEEP YEARLONG RANGE**

**Stipulation:** Timing Limitation. Activity is prohibited from December 1 through May 15 in bighorn rutting, winter and lambing habitat. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect bighorn rutting, winter and lambing habitat from disturbance and facilitate long-term maintenance of bighorn sheep populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer contain rutting, winter, and lambing habitat for bighorn sheep. The dates for the timing restriction may be modified if new wildlife use information indicates that the dates are not valid for the leasehold.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP, determines that the entire leasehold no longer contains bighorn sheep rutting, winter or lambing areas.

## **RESOURCE: BIGHORN SHEEP CORE AREAS**

**Stipulation:** Timing Limitation. Activity is prohibited from December 1 through May 15 in bighorn sheep core habitat. This stipulation does not apply to the operation and maintenance of production facilities unless the

findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect bighorn sheep yearlong habitat necessary for long-term maintenance of bighorn sheep populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer, in consultation with MFWP, if the operator submits a plan which demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in consultation with MFWP, determines that portions of the bighorn sheep core areas can be occupied without adversely affecting bighorn sheep use.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP, determines that the entire leasehold can be occupied without adversely affecting bighorn sheep use in the core areas.

## **RESOURCE: BALD EAGLE NEST SITES/BREEDING HABITAT**

**Stipulation:** No Surface Occupancy. Activity is prohibited within 1/2 mile of bald eagle nest sites and within bald eagle nesting habitat in riparian areas.

**Objective:** To protect bald eagle nesting sites and/or breeding habitat in accordance with the Montana Bald Eagle Management Plan.

**Exception:** An exception may be granted by the authorized officer if the operator submits a plan which demonstrates that the proposed action will not affect the bald eagle or its habitat. If the authorized officer determines that the action may have an adverse affect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by BLM in consultation with the USFWS.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in consultation with USFWS, determines that the area can be occupied without adversely affecting bald eagle nest sites or nesting habitats.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with USFWS, determines that the entire leasehold can be occupied without adversely affecting bald eagle nest sites or nesting habitat.

## **RESOURCE: BALD EAGLE NEST SITES/BREEDING HABITAT**

**Stipulation:** Timing Limitation. No activity is allowed from February 1 through August 31 in a one mile radius

around bald eagle nest sites. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect bald eagle nesting site and/or breeding habitat in accordance with the Montana Bald Eagle Management Plan.

**Exception:** An exception may be granted by the authorized officer if the operator submits a plan which demonstrates that the proposed action will not affect the bald eagle or its habitat. If the authorized officer determines that the action may have an adverse affect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by BLM in consultation with the USFWS.

**Modification:** A modification may be granted if new habitat studies show that a portion of the area is not used by eagles.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with USFWS, determines that the entire leasehold can be occupied without adversely affecting bald eagle nest sites or nesting habitat.

## **RESOURCE: RAPTOR BREEDING TERRITORIES (GOLDEN EAGLE, PRAIRIE FALCON, SWAINSON'S HAWK)**

**Stipulation:** No Surface Occupancy. Activity is prohibited within ¼ mile of raptor nest sites which have been active within the past five years. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect reproductive potential of breeding habitat for special status raptors.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates the impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer are within 1/2 mile of raptor nest sites. The dates for the timing restriction may be modified if new information indicates that the dates are not valid for the leasehold.

**Waiver:** This stipulation may be waived if the authorized officer determines that the entire leasehold no longer is within 1/2 mile of nest sites.

## RESOURCE: PEREGRINE FALCON NEST SITES/BREEDING HABITAT

**Stipulation:** No Surface Occupancy. Activity is prohibited within ¼ mile of peregrine falcon nest sites.

**Objective:** To protect peregrine falcon nesting sites and/or breeding habitat.

**Exception:** An exception may be granted by the authorized officer if the operator submits a plan that demonstrates that the proposed action will not affect the peregrine falcon or its habitat. If the authorized officer determines that the action may have an adverse affect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by BLM in consultation with USFWS.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in consultation with USFWS, determines that portions of the area can be occupied without adversely affecting peregrine falcon nest sites or breeding habitat.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with USFWS, determines that the entire leasehold can be occupied without adversely affecting peregrine falcon nest sites or breeding habitat.

## RESOURCE: FERRUGINOUS HAWK BREEDING TERRITORIES

**Stipulation:** No Surface Occupancy. Activity is prohibited within ¼ mile of ferruginous hawk nest sites that have been active within the past 5 years. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To maintain the reproductive potential of ferruginous hawk nest sites.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrated that the impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting the production potential of ferruginous hawk nest sites.

**Waiver:** This stipulation may be waived if the authorized officer determines that the entire leasehold can be occupied without adversely affecting the production potential of ferruginous hawk nest sites.

## RESOURCE: THREATENED, ENDANGERED, AND SPECIAL STATUS SPECIES

**Stipulation:** Controlled Surface Use. The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or requirements of the Endangered Species Act as amended, 16 U.S.C. § 1531 et seq., including completion of any required procedure for conference or consultation.

**Objective:** Avoid BLM-approved activity that will contribute to a need to list a species or their habitat as threatened or endangered.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

## RESOURCE: WESTSLOPE CUTTHROAT TROUT HABITAT (90-99% PURE)

**Stipulation:** No Surface Occupancy. No activity allowed within 1/4 mile from centerline of stream containing known populations of 90-99% genetically pure westslope cutthroat trout.

**Objective:** To ensure healthy aquatic habitat exists in drainages important to the viability of Upper Missouri River and Columbia River Basins Westslope Cutthroat Trout.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive trout populations. Apply the following mitigation measures:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** A waiver may be granted if the MFWP determines the stream is no longer considered important to the viability of the species.

## RESOURCE: FLUVIAL AND ADFLUVIAL ARCTIC GRAYLING HABITAT

**Stipulation:** No Surface Occupancy. No activity allowed within 1/4 mile from centerline of streams containing known populations of Arctic grayling.

**Objective:** To ensure healthy aquatic habitat exists along rivers and tributaries important to the viability of fluvial and adfluvial Arctic grayling.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive Arctic grayling populations. The following mitigation measures would apply:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality or quantity.

**Modification:** None.

**Waiver:** A waiver may be granted if the MFWP and the USFWS determines the stream is no longer considered important to the viability of the species.

## RESOURCE: BULL TROUT

**Stipulation:** Controlled Surface Use. Activities may be relocated, require special design, or require on and off site mitigation measures to prevent impacts to bull trout populations.

**Objective:** 1) To ensure that proposed activities do not adversely affect the viability of bull trout, operations will be designed and/or located so as to not adversely affect the viability of bull trout. 2) To restrict the timing or type of activities on roads, if needed to control sediment delivery to streams. 3) To require coordination or adjustments of activities within bull trout habitat to avoid or minimize the potential for adverse effects to bull trout because of cumulative impacts from oil and gas activities, plus other activities within the area. This stipulation may limit the extent of field development.

**Exception:** An exemption may be granted if the operator demonstrates in a plan of operations that impacts from the proposed action are acceptable or can be adequately mitigated.

**Modification:** None.

**Waiver:** A waiver may be granted if new habitat studies in coordination with the USFWS conclude that the area affected by this stipulation is not in bull trout occupied habitat.

## RESOURCE: YELLOWSTONE CUTTHROAT

**Stipulation:** No Surface Occupancy. No activity allowed within 1/4 mile from centerline of streams

containing known populations of genetically pure Yellowstone cutthroat trout.

**Objective:** To ensure healthy aquatic habitat exists in drainages important to the viability of Yellowstone Cutthroat.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive trout populations. The following mitigation measures would apply:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None

**Waiver:** A waiver may be granted if the MFWP and the USFWS determines the stream is no longer considered important to the viability of the species.

## RESOURCE: CLASS 1 FISHERIES

**Stipulation:** No Surface Occupancy. No activity allowed within 1000' from centerline of Class 1 fishery streams (Blue Ribbon trout streams).

**Objective:** To ensure healthy aquatic habitat are maintained along Class 1 fisheries.

**Exception:** An exception may be granted if MFWP modify the Class 1 fisheries rating. Application of the following mitigation measures apply:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** None.

## RESOURCE: DEVELOPED RECREATION SITES

**Stipulation:** No Surface Occupancy. Activity is prohibited within 300 feet of developed recreation sites. Currently there are 49 developed recreation sites: Beartooth Landing Rec Site, Bryant Creek Rec Site, Buffalo Hump Rec Site, Carbella Rec Site, Clark's Bay Rec Site, Crimson Bluff Rec Site, Crow Creek Rec Site, Departure Point Rec Site, Devil's Elbow Rec Site, Dickie Bridge Rec Site, Divide Bridge Campground, Divide Bridge Day Use, East Bank Rec Site, Four Corners OHV Trailhead, French Bar Rec Site, Galena Gulch Rec Site, Headlane Trailhead, Holter Lake Dam Rec Site, Holter Lake Rec Site, Jerry Creek Br Fishing Access, John G Mine Trailhead, Log Gulch Rec Site, Lombard Historical, Lower Toston Rec Site, Maiden Rock East, McMaster Hill East Trailhead, McMaster Hill West Trailhead, Moose Creek Trailhead, Ohio Gulch OHV Trailhead, Pintlar Creek Rec Site, Pipestone

OHV Rec Site, Radersburg OHV Trailhead, Ringing Rocks Rec Site, Sawlog Creek Rec Site, Sawmill Gulch Trailhead, Sheep Camp Rec Site, Sheep Mountain Trailhead, Sleeping Giant Trailhead, Spokane Bay Rec Site, Spokane Bay Trailhead, Spokane Hills South, Titan Gulch Rec Site, Toston Dam Rec Site, Tumbleweed Lane Trailhead, Two Camps Vista, Ward Ranch Historical Site, Whiskey Gulch Trailhead, White Sandy Campground, Woodsiding Trailhead

**Objective:** To recognize and protect the public's opportunity for quality recreation experiences at those sites developed for that purpose. A 300-foot buffer would protect capital investment, and to a limited extent, visitors' recreation experiences while at the site.

**Exception:** An exception may be granted by the authorized officer if the operator submits a plan demonstrating that impacts from the proposed action are acceptable or can be mitigated.

**Modification:** The boundaries of the area may be modified by the authorized officer if the recreation area boundaries are changed.

**Waiver:** This stipulation may be waived by the authorized officer if the entire leasehold no longer contains a developed recreation area.

## **RESOURCE: CULTURAL AND PALEONTOLOGICAL RESOURCES**

**Stipulation:** Controlled Surface Use. An inventory of the leased lands may be required prior to surface disturbance to determine if cultural resources or paleontological localities are present and to identify needed mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator shall:

- 1) Contact the Surface Management Agency (SMA) to determine if a cultural or paleontological resource inventory is required. If an inventory is required, then;
- 2) The SMA will complete the required inventory; or the lessee or operator, at their option, may engage the services of a cultural resource consultant acceptable to the SMA to conduct an inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the planned disturbance to cover possible site relocation, or for planning purposes.
- 3) Implement mitigation measures required by the SMA. Mitigation may include the relocation of proposed lease-related activities or other protective measures such as data recovery and/or extensive recordation.

The lessee or operator is required to bring to the attention of the field office manager any cultural resources or other objects of scientific interest

discovered as a result of approved operations under the lease, and shall leave all discoveries intact and undisturbed until directed to proceed by the field office manager (16 U.S.C. 470).

**Objective:** Compliance with Section 106 of the National Historic Preservation Act is required for all actions which may affect cultural resources eligible for nomination to the National Register of Historic Places. Section 6 of the Oil and Gas Lease Terms (Form 3100-11) requires that operations be conducted in a manner that minimizes adverse impacts to cultural and other resources.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

## **RESOURCE: VRM CLASS II, III, & IV AREAS**

**Stipulation:** Controlled Surface Use. All surface disturbing activities and construction of semi-permanent and permanent facilities may require special design including location, painting, and camouflage to blend with the natural surroundings and meet the visual quality objectives for each respective class.

**Objective:** To control the visual impacts of activities and facilities within acceptable levels.

**Exception:** None

**Modification:** None

**Waiver:** None

## **RESOURCE: WETLANDS, FLOODPLAINS, RIPARIAN AREAS, AND WATER QUALITY**

**Stipulation:** No Surface Occupancy. Activity is prohibited within 500 feet of reservoirs, lakes, ponds, and intermittent, ephemeral, or small perennial streams, and within 1000 feet of perennial streams and rivers.

**Objective:** To protect biological and hydrological features associated with wetlands, floodplains, and riparian areas.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.

**Modification:** The area affected by this stipulation may be modified by the authorized officer if it is determined that portions of the area do not include wetlands, floodplains, or riparian areas.

**Waiver:** This stipulation may be waived by the authorized officer if it is determined that the entire

leasehold does not include wetlands, floodplains, or riparian areas.

### **RESOURCE: SPECIAL STATUS PLANT HABITATS**

**Stipulation:** Controlled Surface Use. A field inspection will be conducted for special status plant species by the lessee prior to any surface disturbance. A list of special status plant species will be provided to the lessee at the time of the lease. Plant Species on the list are subject to change over time as new information becomes available. Plant inventories must be conducted at a time of year when the target species are identifiable. A report must be provided to the BLM documenting the presence or absence of special status plants in the area proposed for surface disturbance. The findings of this report may result in restrictions to the operator's plans or may preclude use and occupancy.

**Objective:** Protect and conserve rare plants, associated plant communities and the habitat that supports them.

**Exception:** An exception may be granted if BLM determines that the portion of the lease identified for surface disturbing activities does not support special status plant species or provide potential habitat for these species.

**Modification:** The boundaries of the area to be inventoried for special status plants may be modified if BLM determines that a large portion of the lease identified for surface disturbing activities doesn't support special status plant species or provide potential habitat for these species.

**Waiver:** The field inspection and plant inventory may be waived by the authorized if he/she determines that the subject lease occurs in an area with no known populations of special status plant species and that the area doesn't provide habitat for those species.

### **RESOURCE: KNOWN OR DISCOVERED SPECIAL STATUS PLANTS OR POPULATIONS**

**Stipulation:** No Surface Occupancy. Surface occupancy and use is prohibited within 1/4 mile of special status plant species

**Objective:** Protect and conserve rare plants, associated plant communities and the habitat that supports them.

**Exception:** None.

**Modification:** The boundaries of the no surface occupancy area may be modified if BLM determines that land within ¼ mile of the special status plant population does not provide potential habitat for these species.

**Waiver:** None.

### **RESOURCE: SLOPES >30% ON NON-BOULDER BATHOLITH SOILS OR SLOPES >20% ON BOULDER BATHOLITH SOILS**

**Stipulation:** Prior to surface disturbance on slopes of greater than 20 percent on Boulder Batholith soils, or 30 percent on non-Boulder Batholith soils, an engineering/reclamation plan must be approved by the authorized officer. Site productivity will be restored.

- Surface runoff will be adequately controlled.
- Off-site areas will be protected from accelerated soil erosion.
- Surface disturbing activities will not be conducted during extended wet periods.

**Objective:** To maintain soil productivity and provide necessary protection to prevent excessive soil erosion on steep slopes.

**Exception:** An exception may be granted if the operator can demonstrate in a plan of operations that adverse effects can be minimized and activities safely conducted.

**Modification:** The area affected by this stipulation may be modified by the authorized officer if it is determined that portions of area do not include slopes over 30 percent on non-Boulder Batholith soils or 20 percent on Boulder Batholith, or the operator can demonstrate in a plan of operations that adverse effects can be minimized.

**Waiver:** This stipulation may be waived by the authorized officer if it is determined that none of the leasehold contains slopes greater than 30 percent on non-Boulder Batholith soils or 20 percent on Boulder Batholith soils.

### **RESOURCE: CONTINENTAL DIVIDE NATIONAL SCENIC TRAIL (MARYSVILLE)**

**Stipulation:** No Surface Occupancy. Activity is prohibited within 300 feet of designated Continental Divide National Scenic Trail.

**Objective:** To preserve and protect the existing scenic character of the landscape along the trail.

**Exception:** No exceptions will be granted.

**Modification:** No modifications will be granted.

**Waiver:** No waivers will be granted.

## ALTERNATIVE B OIL AND GAS STIPULATIONS

### RESOURCE: GRIZZLY BEAR – RECOVERY ZONE

**Stipulation:** No Surface Occupancy. Activity is prohibited within the boundary of the Recovery Zone for Grizzly Bears.

**Objective:** To preclude surface disturbing activities in the Grizzly Bear Recovery Zone.

**Exception:** An exception will not be granted while the area is important to grizzly bear recovery or to its conservation following a change in legal status under the Endangered Species Act. Conditions for Exception require that the area is no longer classified as necessary for the recovery of the species.

**Modification:** This stipulation may be modified if a portion of the area is no longer important to grizzly bear recovery or to its conservation following a change in legal status under the Endangered Species Act. Conditions for Modification require that a portion of the area is no longer classified as necessary for the recovery of the species and is not considered important to its conservation.

**Waiver:** This stipulation will not be waived while the area is important to grizzly bear recovery or to its conservation following a change in legal status under the Endangered Species Act. Conditions for Waiver require that the area is no longer classified as necessary for the recovery or conservation of the species.

### RESOURCE: GRIZZLY BEAR - DISTRIBUTION ZONE

**Stipulation:** Timing Limitation. Activity is prohibited from April 1 to June 30 and from September 15 – October 15 in the Grizzly Bear Distribution Zone.

**Objective:** To preclude surface disturbing activities in grizzly bear denning areas which could cause increased stress and/or displacement of animals during critical time periods (April 1 - June 30 and September 15 – October 15).

**Exception:** An exception may be granted if it is determined that the animals have moved out of and are not using the general area during the particular year.

**Modification:** A modification of the stipulation may be granted if new habitat studies show that a portion of the area is not used by grizzly bear for denning.

**Waiver:** A waiver may be granted if new habitat studies in coordination with the Fish and Wildlife Service conclude that the area affected by this stipulation is not critical for grizzly bear denning.

### RESOURCE: GRAY WOLF – FORMER NORTHWEST MONTANA RECOVERY AREA ENDANGERED POPULATION

**Stipulation:** Timing Limitation. Activity is prohibited within a 1 mile buffer around wolf dens or rendezvous sites from April 15 to June 30 in the Northwest Montana Recovery Area. This stipulation would be applied to the Northwest Montana Recovery Area (94,700 acres) but there are no known den or rendezvous sites currently mapped in this area.

**Objective:** To preclude surface disturbing activities in wolf denning or rendezvous areas in the former Northwest Montana Recovery Area which could cause increased stress and/or displacement of animals during the critical time period (April 15 - June 30).

**Exception:** An exception may be granted if it is determined that the animals have moved out of and are not using the general area during the particular year.

**Modification:** A modification of the stipulation may be granted if new habitat studies show that a portion of the area is not used by wolves for denning or for rendezvous sites.

**Waiver:** A waiver may be granted if new habitat studies in coordination with the Fish and Wildlife Service conclude that the area affected by this stipulation is not critical for wolf denning or for rendezvous sites.

### RESOURCE: PRAIRIE DOG TOWNS

**Stipulation:** No Surface Occupancy. Activity is prohibited within the boundary of any prairie dog town.

**Objective:** To protect habitat for prairie dog towns.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan which demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting prairie dogs.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP and USFWS, determines that the entire leasehold no longer contains prairie dogs.

### RESOURCE: SAGE GROUSE WINTER/SPRING RANGE

**Stipulation:** Timing Limitation. No activity from December 1 through May 15 within winter and spring range for sage grouse. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued

need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect sage grouse winter range from disturbance during the winter/spring season, and to facilitate long-term maintenance of wildlife populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer in consultation with MFWP and the USFWS, if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer contain sage grouse winter/spring range. The dates for the timing restriction may be modified if new information indicates that the December 1 through May 15 dates are not valid for the leasehold.

**Waiver:** This stipulation may be waived if the authorized officer determines that the entire leasehold no longer contains sage grouse winter/spring range, or if in coordination with MFWP and the USFWS, determines that the area is not critical for sage grouse.

### **RESOURCE: SAGE GROUSE STRUTTING GROUNDS (LEKS)**

**Stipulation:** No Surface Occupancy. Activity is prohibited within 1/4 mile of sage grouse leks.

**Objective:** To protect sage grouse strutting grounds and leks to maintain regional sage grouse populations.

**Exception:** An exception to this stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks.

**Waiver:** The stipulation may be waived if the authorized officer, in consultation with MFWP, determines that the entire leasehold can be occupied without adversely affecting sage grouse leks.

### **RESOURCE: SAGE GROUSE BREEDING HABITAT**

**Stipulation:** Timing Limitation. Activity is restricted from March 1 through June 30 in nesting and early brood rearing habitat (defined as within three miles of leks). This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect sage grouse leks and breeding habitat necessary for long-term maintenance of regional sage grouse populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP and the USFWS, determines that the entire leasehold can be occupied without adversely affecting sage grouse leks or the surrounding breeding habitat.

### **RESOURCE: WILDLIFE MANAGEMENT AREAS**

**Stipulation:** No Surface Occupancy. Activity is prohibited within the boundary of Wildlife Management Areas administered by Montana Department of Fish, Wildlife, and Parks (MFWP).

**Objective:** To protect MFWP elk winter range necessary for long-term maintenance of regional elk populations and other wildlife values.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

### **RESOURCE: BIG GAME WINTER/SPRING RANGE**

**Stipulation:** Timing Limitation. No activity from December 1 through May 15 within winter range for wildlife. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect mule deer, elk, antelope, and moose winter/spring range from disturbance during the winter/spring season, and to facilitate long-term maintenance of wildlife populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer in consultation with MFWP, if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in consultation with MFWP, determines that portions of the area no longer contain wildlife winter/spring range. The

dates for the timing restriction may be modified if new wildlife use information indicates that the December 1 through May 15 dates are not valid for the leasehold.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP, determines that the entire leasehold no longer contains winter/spring range for wildlife.

### **RESOURCE: ELK CALVING/BIG GAME BIRTHING AREAS**

**Stipulation:** Timing Limitation. Activity is prohibited from April 1 through June 30 in big game birthing areas. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect mule deer, elk, antelope, and moose birthing areas from disturbance and facilitate long-term maintenance of wildlife populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer contain birthing habitat for big game species. The dates for the timing restriction may be modified if new wildlife use information indicates that the dates are not valid for the leasehold.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP, determines that the entire leasehold no longer contains big game birthing areas.

### **RESOURCE: BIGHORN SHEEP YEARLONG RANGE**

**Stipulation:** Timing Limitation. Activity is prohibited from November 1 through June 30 in bighorn rutting, winter and lambing habitat. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect bighorn rutting, winter and lambing habitat from disturbance and facilitate long-term maintenance of bighorn sheep populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer contain rutting, winter, and lambing habitat for bighorn sheep. The dates for the timing restriction may be modified if new wildlife use information indicates that the dates are not valid for the leasehold.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP, determines that the entire leasehold no longer contains bighorn sheep rutting, winter or lambing areas.

### **RESOURCE: BIGHORN SHEEP CORE AREAS**

**Stipulation:** No Surface Occupancy. Activity is prohibited within the bighorn sheep core areas.

**Objective:** To protect bighorn sheep yearlong habitat necessary for long-term maintenance of bighorn sheep populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer, in consultation with MFWP, if the operator submits a plan which demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in consultation with MFWP, determines that portions of the bighorn sheep core areas can be occupied without adversely affecting bighorn sheep use.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP, determines that the entire leasehold can be occupied without adversely affecting bighorn sheep core areas.

### **RESOURCE: BALD EAGLE NEST SITES/BREEDING HABITAT**

**Stipulation:** No Surface Occupancy. Activity is prohibited within 1/2 mile of bald eagle nest sites and within bald eagle nesting habitat in riparian areas.

**Objective:** To protect bald eagle nesting sites and/or breeding habitat in accordance with the Montana Bald Eagle Management Plan.

**Exception:** An exception may be granted by the authorized officer if the operator submits a plan which demonstrates that the proposed action will not affect the bald eagle or its habitat. If the authorized officer determines that the action may have an adverse affect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by BLM in consultation with the USFWS.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in consultation with USFWS, determines that the area can

be occupied without adversely affecting bald eagle nest sites or nesting habitats.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with USFWS, determines that the entire leasehold can be occupied without adversely affecting bald eagle nest sites or nesting habitat.

### **RESOURCE: BALD EAGLE NEST SITES/BREEDING HABITAT**

**Stipulation:** Timing Limitation. No activity is allowed from February 1 through August 31 in a one mile radius around bald eagle nest sites. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect bald eagle nesting site and/or breeding habitat in accordance with the Montana Bald Eagle Management Plan.

**Exception:** An exception may be granted by the authorized officer if the operator submits a plan which demonstrates that the proposed action will not affect the bald eagle or its habitat. If the authorized officer determines that the action may have an adverse affect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by BLM in consultation with the USFWS.

**Modification:** A modification may be granted if new habitat studies show that a portion of the area is not used by eagles.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with USFWS, determines that the entire leasehold can be occupied without adversely affecting bald eagle nest sites or nesting habitat.

### **RESOURCE: RAPTOR BREEDING TERRITORIES (GOLDEN EAGLE, PRAIRIE FALCON, SWAINSON'S HAWK)**

**Stipulation:** Timing Limitation. No activity from March 1 through July 31, within 1/2 mile of raptor nest sites which have been active within the past five years. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect reproductive potential of breeding habitat for special status raptors.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits

a plan that demonstrates the impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer are within 1/2 mile of raptor nest sites. The dates for the timing restriction may be modified if new information indicates that the dates are not valid for the leasehold.

**Waiver:** This stipulation may be waived if the authorized officer determines that the entire leasehold no longer is within 1/2 mile of nest sites.

### **RESOURCE: PEREGRINE FALCON NEST SITES/BREEDING HABITAT**

**Stipulation:** No Surface Occupancy. Activity is prohibited within one mile of peregrine falcon nest sites.

**Objective:** To protect peregrine falcon nesting sites and/or breeding habitat.

**Exception:** An exception may be granted by the authorized officer if the operator submits a plan that demonstrates that the proposed action will not affect the peregrine falcon or its habitat. If the authorized officer determines that the action may have an adverse affect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by BLM in consultation with USFWS.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in consultation with USFWS, determines that portions of the area can be occupied without adversely affecting peregrine falcon nest sites or breeding habitat.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with USFWS, determines that the entire leasehold can be occupied without adversely affecting peregrine falcon nest sites or breeding habitat.

### **RESOURCE: FERRUGINOUS HAWK BREEDING TERRITORIES**

**Stipulation:** No Surface Occupancy. Activity is prohibited within 1/2 mile of ferruginous hawk nest sites that have been active within the past 5 years.

**Objective:** To maintain the reproductive potential of ferruginous hawk nest sites.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrated that the impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without

adversely affecting the production potential of ferruginous hawk nest sites.

**Waiver:** This stipulation may be waived if the authorized officer determines that the entire leasehold can be occupied without adversely affecting the production potential of ferruginous hawk nest sites.

### **RESOURCE: THREATENED, ENDANGERED, AND SPECIAL STATUS SPECIES**

**Stipulation:** Controlled Surface Use. The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or requirements of the Endangered Species Act as amended, 16 U.S.C. § 1531 et seq., including completion of any required procedure for conference or consultation.

**Objective:** Avoid BLM-approved activity that will contribute to a need to list a species or their habitat as threatened or endangered.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

### **RESOURCE: WESTSLOPE CUTTHROAT TROUT HABITAT (90-99% PURE)**

**Stipulation:** No Surface Occupancy. No activity allowed within 1/2 mile from centerline of stream containing known populations of 90-99% genetically pure westslope cutthroat trout.

**Objective:** To ensure healthy aquatic habitat exists in drainages important to the viability of Upper Missouri River and Columbia River Basins Westslope Cutthroat Trout.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive trout populations. Apply the following mitigation measures:

- a) No net increase in sediment over existing condition.

- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** A waiver may be granted if the MFWP determines the stream is no longer considered important to the viability of the species.

### **RESOURCE: WESTSLOPE CUTTHROAT TROUT HABITAT (99-100% PURE)**

**Stipulation:** No Surface Occupancy. No activity allowed within 1/2 mile from centerline of stream containing known populations of 99-100% genetically pure westslope cutthroat trout.

**Objective:** To prevent sensitive aquatic habitat and trout populations from being impacted.

**Exception:** An exemption may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive trout populations. Apply the following mitigation measures:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modifications:** None

**Waiver:** A waiver may be granted if the MFWP determines the stream is no longer considered important to the viability of the species.

### **RESOURCE: FLUVIAL AND ADFLUVIAL ARCTIC GRAYLING HABITAT**

**Stipulation:** No Surface Occupancy. No activity allowed within 1/2 mile from centerline of stream containing known populations of Arctic grayling.

**Objective:** To ensure healthy aquatic habitat exists along rivers and tributaries important to the viability of fluvial and adfluvial Arctic grayling.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive Arctic grayling populations. The following mitigation measures would apply:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality or quantity.

**Modification:** None.

**Waiver:** A waiver may be granted if the MFWP and the USFWS determines the stream is no longer considered important to the viability of the species.

## RESOURCE: BULL TROUT

**Stipulation:** No Surface Occupancy. No activity allowed within 1/2 mile from centerline of streams containing known populations of bull trout.

**Objective:** To ensure healthy aquatic habitat exists in drainages important to the viability of bull trout.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive trout populations. Apply the following mitigation measures:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** A waiver may be granted if the MFWP and the USFWS determines the stream is no longer considered important to the viability of the species.

## RESOURCE: YELLOWSTONE CUTTHROAT (90-100% PURE)

**Stipulation:** No Surface Occupancy. No activity allowed within 1/2 mile from centerline of streams containing known populations of 90-100% genetically pure Yellowstone cutthroat trout.

**Objective:** To ensure healthy aquatic habitat exists in drainages important to the viability of Yellowstone Cutthroat.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive trout populations. The following mitigation measures would apply:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None

**Waiver:** A waiver may be granted if the MFWP and the USFWS determines the stream is no longer considered important to the viability of the species.

## RESOURCE: STREAMS WITH HIGH RESTORATION POTENTIAL FOR NATIVE FISH

**Stipulation:** No Surface Occupancy. No activity allowed within 1/2 mile from centerline of streams that are identified by the BLM as having high restoration potential for westslope cutthroat trout, Yellowstone cutthroat trout, Arctic grayling and/or bull trout.

**Objective:** To ensure healthy aquatic and riparian habitats are maintained in and along streams with the potential for native fish re-introductions and restoration.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect potential habitat for native fish populations or degrade suitable habitat for native fish restoration/re-introduction. The following mitigation measures would apply:

- c) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** None.

## RESOURCE: CLASS 1 FISHERIES

**Stipulation:** No Surface Occupancy. No activity allowed within 1/2 mile from centerline of Class 1 fishery streams (Blue Ribbon trout streams).

**Objective:** To ensure healthy aquatic habitat are maintained along Class 1 fisheries.

**Exception:** An exception may be granted if MFWP modifies the Class 1 fisheries rating. Application of the following mitigation measures apply:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** None.

## RESOURCE: DEVELOPED RECREATION SITES

**Stipulation:** No Surface Occupancy. Surface occupancy and use is prohibited within 1/4 mile of developed recreation sites, regardless of administering agency. Currently there are 49 developed BLM recreation sites: Beartooth Landing Rec Site, Bryant Creek Rec Site, Buffalo Hump Rec Site, Carbella Rec Site, Clark's Bay Rec Site, Crimson Bluff Rec Site, Crow Creek Rec Site, Departure Point Rec Site, Devil's Elbow Rec Site, Dickie Bridge Rec Site, Divide Bridge Campground, Divide Bridge Day Use, East Bank Rec Site, Four Corners OHV Trailhead, French Bar Rec Site, Galena Gulch Rec Site, Headlane Trailhead, Holter Lake Dam Rec Site, Holter Lake Rec Site, Jerry Creek Br Fishing Access, John G Mine Trailhead, Log Gulch Rec Site, Lombard Historical, Lower Toston Rec Site, Maiden Rock East, McMaster Hill East Trailhead, McMaster Hill West Trailhead, Moose Creek Trailhead, Ohio Gulch OHV Trailhead, Pintlar Creek Rec Site, Pipestone OHV Rec Site, Radersburg OHV Trailhead, Ringing Rocks Rec Site, Sawlog Creek Rec Site,

Sawmill Gulch Trailhead, Sheep Camp Rec Site, Sheep Mountain Trailhead, Sleeping Giant Trailhead, Spokane Bay Rec Site, Spokane Bay Trailhead, Spokane Hills South, Titan Gulch Rec Site, Toston Dam Rec Site, Tumbleweed Lane Trailhead, Two Camps Vista, Ward Ranch Historical Site, Whiskey Gulch Trailhead, White Sandy Campground, Woodsiding Trailhead

**Objective:** To recognize and protect the public's opportunity for quality recreation experiences at those sites developed for that purpose. Since BLM recreation sites are generally developed to support the use of the surrounding lands, the ¼ mile buffer offers some protection for perpetuating those opportunities for which the site was developed, as well as protecting capital investments at the site.

**Exception:** An exception may be granted if a site is moved or eliminated.

**Modification:** The list of developed recreation sites may be modified if development is removed, or if a currently undeveloped site is developed in the future.

**Waiver:** A waiver may be granted if a site is moved or eliminated.

## RESOURCE: SPECIAL RECREATION MANAGEMENT AREAS (SRMAS)

**Stipulation:** Controlled Surface Use. Operations within SRMAS must be conducted within a manner that minimizes encounters and conflicts with recreation users. Proposed activities may not alter or depreciate important recreational values located within the SRMA boundary. This would apply to the following Special Recreation Management Areas for this alternative: Holter Lake/Missouri River, Sleeping Giant, Hauser Lake/Lower Missouri River, Toston Reservoir/Missouri River, Scratchgravel Hills, Sheep Mountain, Pipestone, Upper Big Hole River, and Humbug Spires.

**Objective:** To prevent user conflicts and incompatible uses in areas with high recreational values and significant amounts of recreational activity.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan demonstrating the impacts to recreation values and recreation users are acceptable or can be adequately mitigated.

**Modification:** The area affected by this stipulation may be modified by the authorized officer if the boundaries of the SRMA are changed.

**Waiver:** None.

## RESOURCE: CULTURAL AND PALEONTOLOGICAL RESOURCES

**Stipulation:** Controlled Surface Use. An inventory of the leased lands may be required prior to surface

disturbance to determine if cultural resources or paleontological localities are present and to identify needed mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator shall:

- 1) Contact the Surface Management Agency (SMA) to determine if a cultural or paleontological resource inventory is required. If an inventory is required, then:
- 2) The SMA will complete the required inventory; or the lessee or operator, at their option, may engage the services of a cultural resource consultant acceptable to the SMA to conduct an inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the planned disturbance to cover possible site relocation, or for planning purposes.
- 3) Implement mitigation measures required by the SMA. Mitigation may include relocation of proposed lease-related activities or other protective measures such as data recovery and/or extensive recordation.
- 4) The SMA will consult with Native American tribes as per IM 2005 – 003.

The lessee or operator is required to bring to the attention of the field office manager any cultural resources or other objects of scientific interest discovered as a result of approved operations under the lease, and shall leave all discoveries intact and undisturbed until directed to proceed by the field office manager (16 U.S.C. 470).

**Objective:** Compliance with Section 106 of the National Historic Preservation Act is required for all actions which may affect cultural resources eligible for nomination to the National Register of Historic Places. Section 6 of the Oil and Gas Lease Terms (Form 3100-11) requires that operations be conducted in a manner that minimizes adverse impacts to cultural and other resources.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

## RESOURCE: NATIONAL REGISTER OF HISTORIC PROPERTIES ELIGIBLE PROPERTIES/DISTRICTS

**Stipulation:** No Surface Occupancy: Activity is prohibited within 300 ft. of site boundaries and/or districts eligible for, or listed on the National Register of Historic Places. There is one known district, the Indian Creek Historic Mining District (134 acres).

**Objective:** To avoid disturbance to and protect, significant properties, districts, and their setting.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the lessee or operator submits a plan which demonstrates that the adverse impacts to cultural properties can be mitigated through data recovery and/or extensive recordation. Where impacts to cultural resources cannot be mitigated to the satisfaction of the Surface Management Agency, surface occupancy in that area must be prohibited.

**Modification:** No modification will be granted.

**Waiver:** No waiver will be granted.

## **RESOURCE: VRM CLASS II, III & IV AREAS**

**Stipulation:** Controlled Surface Use. All surface disturbing activities and construction of semi-permanent and permanent facilities may require special design including location, painting, and camouflage to blend with the natural surroundings and meet the visual quality objectives for each respective class.

**Objective:** To control the visual impacts of activities and facilities within acceptable levels.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

## **RESOURCE: WETLANDS, FLOODPLAINS, RIPARIAN AREAS, AND WATER QUALITY**

**Stipulation:** No Surface Occupancy. Activity is prohibited within wetlands, floodplains, and riparian areas.

**Objective:** To maintain riparian/wetland functions and water quality.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** None.

**Waiver:** None.

## **RESOURCE: SPECIAL STATUS PLANT HABITATS**

**Stipulation:** Controlled Surface Use. A field inspection will be conducted for special status plant species by the lessee prior to any surface disturbance. A list of special status plant species will be provided to the lessee at the time of the lease. Plant Species on the list are subject to change over time as new information becomes available. Plant inventories must be conducted at a time of year when the target species are identifiable. A report must be provided to the BLM documenting the presence or

absence of special status plants in the area proposed for surface disturbance. The findings of this report may result in restrictions to the operator's plans or may preclude use and occupancy.

**Objective:** Protect and conserve rare plants, associated plant communities and the habitat that supports them.

**Exception:** An exception may be granted if BLM determines that the portion of the lease identified for surface disturbing activities does not support special status plant species or provide potential habitat for these species.

**Modification:** The boundaries of the area to be inventoried for special status plants may be modified if BLM determines that a large portion of the lease identified for surface disturbing activities doesn't support special status plant species or provide potential habitat for these species.

**Waiver:** The field inspection and plant inventory may be waived by the authorized if he/she determines that the subject lease occurs in an area with no known populations of special status plant species and that the area doesn't provide habitat for those species.

## **RESOURCE: KNOWN OR DISCOVERED SPECIAL STATUS PLANTS OR POPULATIONS**

**Stipulation:** No Surface Occupancy. Surface occupancy and use is prohibited within 1/4 mile of special status plant species.

**Objective:** Protect and conserve rare plants, associated plant communities and the habitat that supports them.

**Exception:** None.

**Modification:** The boundaries of the no surface occupancy area may be modified if BLM determines that land within ¼ mile of the special status plant population does not provide potential habitat for these species.

**Waiver:** None.

## **RESOURCE: MUNICIPAL WATERSHEDS**

**Stipulation:** No Surface Occupancy. Surface occupancy would be prohibited in the following municipal watersheds: Missouri River Siphon, Tenmile Creek Drainage, Big Hole River Intake, and Moulton Reservoir.

**Objective:** To protect drinking water for Municipalities within the Butte Field Office.

**Exception:** If the lessee can demonstrate that operations can occur on the lease without causing negative impacts to water quality at the intakes, an exception may be granted, if approved in writing by the authorized officer

in consultation with the Field Office watershed specialist and the communities of Butte and Helena.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied and operations will not cause water quality at intakes to fail to meet drinking water standards established by Montana Department of Environmental Quality (MDEQ).

**Waiver:** None

**RESOURCE: AREAS OR ACTIVE MASS WASTING, UNSTABLE LAND AREAS, SLOPES >30% ON NON-BOULDER BATHOLITH SOILS OR SLOPES >20% ON BOULDER BATHOLITH SOILS**

**Stipulation:** Controlled Surface Use. Prior to surface disturbance on areas of active mass wasting, unstable land areas, or slopes greater than 30 on non-Boulder Batholith soils or 20 percent on Boulder Batholith soils, an engineering/reclamation plan must be approved by the authorized officer. Such plan must demonstrate how the following will be accomplished:

- Site productivity will be restored.
- Surface runoff will be adequately controlled.
- Off-site areas will be protected from accelerated soil erosion.
- Surface disturbing activities will not be conducted during wet periods.

**Objective:** To maintain soil productivity and provide necessary protection to prevent excessive soil erosion on steep slopes.

**Exceptions:** An exception may be granted if the operator can demonstrate in a plan of operations that adverse effects can be minimized and activities safely conducted.

**Modifications:** The area affected by this stipulation may be modified by the authorized officer if it is determined that portions of area do not include slopes over 30 percent on non-Boulder Batholith soils or 20 percent on Boulder Batholith, or the operator can demonstrate in a plan of operations that adverse effects can be minimized.

**Waiver:** This stipulation may be waived by the authorized officer if it is determined that none of the leasehold contains slopes greater than 30 percent on non-Boulder Batholith soils or 20 percent on Boulder Batholith soils.

**RESOURCE: CONTINENTAL DIVIDE NATIONAL SCENIC TRAIL (MARYSVILLE)**

**Stipulation:** No Surface Occupancy. Surface occupancy and use is prohibited within 1/2 mile of the Continental Divide National Scenic Trail.

**Objective:** To preserve and protect the existing scenic character of the landscape along the trail.

**Exception:** May be granted if this portion of the trail is relocated or if operator submits a plan that demonstrates that impacts to the area and the user experiences can be mitigated.

**Modification:** Modification may be granted should the trail be relocated or impacts of the action will not be noticed by users of the trail.

**Waiver:** May be granted if trail is moved from current location.

**RESOURCE: DESIGNATED NATIONAL HISTORIC TRAILS – LEWIS AND CLARK TRAIL**

**Stipulation:** No Surface Occupancy. Surface occupancy and use is prohibited within 1/2 mile of designated National Historic Trail.

**Objective:** To preserve and protect designated National Historic Trails and the natural setting in which they occur.

**Exception:** No exceptions will be granted unless the operator demonstrates through a submitted plan that impacts to the area and its users can be mitigated.

**Modification:** No modifications will be granted unless impacts of the action will not be apparent to user along the trail.

**Waiver:** May be granted if impacts can be mitigated so that area values and user experiences are not negatively affected.

**RESOURCE: RIVERS SUITABLE FOR WILD AND SCENIC RIVER DESIGNATION**

**Stipulation:** No Surface Occupancy. Surface occupancy would be prohibited within 1/2 mile either side of the active river channel. This would apply to the following river segment lengths: 3.1 miles of the upper Missouri River and 2.6 miles of Muskrat Creek.

**Objective:** To protect river corridors and their Outstandingly Remarkable Values considered suitable for inclusion in the National Wild and Scenic Rivers system and the associated outstandingly remarkable values.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

## **RESOURCE: RECREATION AND PUBLIC PURPOSES ACT LEASES AND PATENTS, AND 2920 AUTHORIZATIONS**

**Stipulation:** No Surface Occupancy (NSO). Surface Occupancy and use is prohibited on Recreation & Public Purposes leases and patents and on leases and permits authorized under regulations found at 43 CFR 2920.

**Objective:** To protect developed facilities and commercial, recreational, and public uses and prevent incompatible uses on existing authorized areas.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan demonstrating that impacts from the proposed action are acceptable or can be adequately mitigated in coordination with the holder of the land use authorization.

**Modification:** The area affected by this stipulation may be modified by the authorized officer if land use authorization boundaries are modified.

**Waiver:** This stipulation may be waived by the authorized officer if land use authorization boundaries are modified.

## **ALTERNATIVE C OIL AND GAS STIPULATIONS**

### **RESOURCE: GRIZZLY BEAR – RECOVERY ZONE**

**Stipulation:** No Surface Occupancy. Activity is prohibited within the boundary of the Recovery Zone for grizzly bears.

**Objective:** To preclude surface disturbing activities in the Grizzly Bear Recovery Zone.

**Exception:** An exception will not be granted while the area is important to grizzly bear recovery or to its conservation following a change in legal status under the Endangered Species Act. Conditions for Exception require that the area is no longer classified as necessary for the recovery of the species.

**Modification:** This stipulation may be modified if a portion of the area is no longer important to grizzly bear recovery or to its conservation following a change in legal status under the Endangered Species Act. Conditions for Modification require that a portion of the area is no longer classified as necessary for the recovery of the species and is not considered important to its conservation.

**Waiver:** This stipulation will not be waived while the area is important to grizzly bear recovery or to its conservation following a change in legal status under the Endangered Species Act. Conditions for Waiver require that the area is no longer classified as necessary for the recovery or conservation of the species.

### **RESOURCE: GRIZZLY BEAR - DISTRIBUTION ZONE**

**Stipulation:** No Surface Occupancy. Activity is prohibited in the boundary of the Distribution Zone for grizzly bears.

**Objective:** To preclude surface disturbing activities to denning habitat in the Grizzly Bear Distribution Zone.

**Exception:** An exception may be granted if it is determined that the animals have moved out of and are not using the general area during the particular year.

**Modification:** A modification of the stipulation may be granted if new habitat studies show that a portion of the area is not used by grizzly bear for denning.

**Waiver:** A waiver may be granted if new habitat studies in coordination with the Fish and Wildlife Service conclude that the area affected by this stipulation is not critical for grizzly bear denning.

### **RESOURCE: GRAY WOLF – FORMER NORTHWEST MONTANA RECOVERY AREA ENDANGERED POPULATION**

**Stipulation:** No Surface Occupancy. Activity is prohibited within a 1 mile buffer around wolf dens or rendezvous sites in the former Northwest Montana Recovery Area. This stipulation would be applied to the former Northwest Montana Recovery Area (94,700 acres) but there are no known den or rendezvous sites currently mapped in this area.

**Objective:** To preclude surface disturbing activities in wolf denning or rendezvous areas in the Northwest Montana Recovery Area which could cause increased stress and/or displacement of animals.

**Exception:** An exception may be granted if it is determined that the animals have moved out of and are not using the general area during the particular year.

**Modification:** A modification of the stipulation may be granted if new habitat studies show that a portion of the area is not used by grizzly bear for denning.

**Waiver:** A waiver may be granted if new habitat studies in coordination with the Fish and Wildlife Service conclude that the area affected by this stipulation is not critical for grizzly bear denning.

## **RESOURCE: PRAIRIE DOG TOWNS**

**Stipulation:** No lease within the boundary of any prairie dog town.

**Objective:** To protect habitat for prairie dog towns.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

## **RESOURCE: SAGE GROUSE WINTER/SPRING RANGE**

**Stipulation:** No Lease

**Objective:** To protect sage grouse winter range from disturbance during the winter/spring season, and to facilitate long-term maintenance of wildlife populations.

**Exception:** None

**Modification:** None

**Waiver:** None

## **RESOURCE: SAGE GROUSE STRUTTING GROUNDS (LEKS)**

**Stipulation:** No lease within 1/2 mile of sage grouse leks.

**Objective:** To protect sage grouse strutting grounds and leks to maintain regional sage grouse populations.

**Exception:** None

**Modification:** None

**Waiver:** None

## **RESOURCE: SAGE GROUSE BREEDING HABITAT**

**Stipulation:** No Surface Occupancy. Surface occupancy land use is prohibited in sage grouse nesting and early-brook rearing habitat (defined as within 3 miles of leks).

**Objective:** To protect sage grouse leks and breeding habitat necessary for long-term maintenance of regional sage grouse populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP and the

USFWS, determines that the entire leasehold can be occupied without adversely affecting sage grouse leks or the surrounding breeding habitat.

## **RESOURCE: WILDLIFE MANAGEMENT AREAS**

**Stipulation:** No Lease

**Objective:** To protect MFWP elk winter range necessary for long-term maintenance of regional elk populations and other wildlife values.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

## **RESOURCE: BIG GAME WINTER/SPRING RANGE**

**Stipulation:** No Lease

**Objective:** To protect mule deer, elk, antelope, and moose winter/spring range from disturbance during the winter/spring season, and to facilitate long-term maintenance of wildlife populations.

**Exception:** None

**Modification:** None

**Waiver:** None

## **RESOURCE: ELK CALVING/BIG GAME BIRTHING AREAS**

**Stipulation:** No Lease

**Objective:** To protect mule deer, elk, antelope, and moose birthing areas from disturbance and facilitate long-term maintenance of wildlife populations.

**Exception:** None

**Modification:** None

**Waiver:** None

## **RESOURCE: BIGHORN SHEEP YEARLONG RANGE (INCLUDING CORE AREAS)**

**Stipulation:** No Lease

**Objective:** To protect bighorn rutting, winter and lambing habitat from disturbance and facilitate long-term maintenance of bighorn sheep populations.

**Exception:** None

**Modification:** None

**Waiver:** None.

## **RESOURCE: BALD EAGLE NEST SITES/BREEDING HABITAT**

**Stipulation:** No Lease. No lease is allowed in a one mile radius around bald eagle nest sites.

**Objective:** To protect bald eagle nesting sites and/or breeding habitat in accordance with the Montana Bald Eagle Management Plan.

**Exception:** None

**Modification:** None.

**Waiver:** None

## **RESOURCE: RAPTOR BREEDING TERRITORIES (GOLDEN EAGLE, PRAIRIE FALCON, SWAINSON'S HAWK)**

**Stipulation:** No Lease within 1/2 mile of raptor nest sites which have been active within the past five years.

**Objective:** To protect reproductive potential of breeding habitat for special status raptors.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

## **RESOURCE: PEREGRINE FALCON NEST SITES/BREEDING HABITAT**

**Stipulation:** No Lease within one mile of peregrine falcon nest sites.

**Objective:** To protect peregrine falcon nesting sites and/or breeding habitat.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

## **RESOURCE: FERRUGINOUS HAWKS**

**Stipulation:** No Lease within 1/2 mile of ferruginous hawk nest sites that have been active in the past 5 years.

**Objective:** To maintain the reproductive potential of ferruginous hawk nest sites.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

## **RESOURCE: FERRUGINOUS HAWK BREEDING TERRITORIES**

**Stipulation:** Timing Limitation. No activity is permitted from March 1 to August 31 within one mile of hawk nest sites that have been active within the past five

years. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect reproductive potential of breeding habitat for special status raptors.

**Exception:** An exception to this stipulation may be granted by the authorized officer of the operator submits a plan that demonstrates the impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer are within one mile of raptor nest sites. The dates for the timing restriction may be modified if new information indicates that the dates are not valid for the leasehold.

**Waiver:** This stipulation may be waived if the authorized officer determines that the entire leasehold no longer is within one mile of ferruginous nest sites.

## **RESOURCE: THREATENED, ENDANGERED, AND SPECIAL STATUS SPECIES**

**Stipulation:** Controlled Surface Use. The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or requirements of the Endangered Species Act as amended, 16 U.S.C. § 1531 et seq., including completion of any required procedure for conference or consultation.

**Objective:** Avoid BLM-approved activity that will contribute to a need to list a species or their habitat as threatened or endangered.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

## **RESOURCE: WESTSLOPE CUTTHROAT TROUT HABITAT (90-99% PURE)**

**Stipulation:** No Surface Occupancy. No activity allowed within 1/2 mile from centerline of stream

containing known populations of 90-99% genetically pure westslope cutthroat trout.

**Objective:** To ensure healthy aquatic habitat exists in drainages important to the viability of Upper Missouri River and Columbia River Basins Westslope Cutthroat Trout.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive trout populations. Apply the following mitigation measures:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** A waiver may be granted if the MFWP determines the stream is no longer considered important to the viability of the species.

### **RESOURCE: WESTSLOPE CUTTHROAT TROUT HABITAT (99-100% PURE)**

**Stipulation:** No Lease within ½ mile from centerline of stream containing known populations of 99-100% genetically pure westslope cutthroat trout.

**Objective:** To prevent sensitive aquatic habitat and trout populations from being impacted.

**Exception:** None.

**Modifications:** None.

**Waiver:** None.

### **RESOURCE: FLUVIAL AND ADFLUVIAL ARCTIC GRAYLING HABITAT**

**Stipulation:** No Surface Occupancy. No activity allowed within 1/2 mile from centerline of stream containing known populations of Arctic grayling.

**Objective:** To ensure healthy aquatic habitat exists along rivers and tributaries important to the viability of fluvial and adfluvial Arctic grayling.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive Arctic grayling populations. The following mitigation measures would apply:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** A waiver may be granted if the MFWP and the USFWS determines the stream is no longer considered important to the viability of the species.

### **RESOURCE: BULL TROUT**

**Stipulation:** No Surface Occupancy. No activity allowed within 1 mile from centerline of streams containing known populations of bull trout.

**Objective:** To ensure healthy aquatic habitat exists in drainages important to the viability of bull trout.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive trout populations. Apply the following mitigation measures:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** A waiver may be granted if the MFWP and the USFWS determines the stream is no longer considered important to the viability of the species.

### **RESOURCE: YELLOWSTONE CUTTHROAT (90-100% PURE)**

**Stipulation:** No Lease within 1/2 mile from centerline of streams containing known populations of 90-100% genetically pure Yellowstone cutthroat trout.

**Objective:** To ensure healthy aquatic habitat exists in drainages important to the viability of Yellowstone Cutthroat.

**Exception:** None.

**Modification:** None.

**Waiver:** None

### **RESOURCE: CLASS 1 FISHERIES**

**Stipulation:** No Surface Occupancy. No activity allowed within 1 mile from the centerline of Class 1 fishery streams (Blue Ribbon trout streams).

**Objective:** To ensure healthy aquatic habitat are maintained along Class 1 fisheries.

**Exception:** An exception may be granted if MFWP modifies the Class 1 fisheries rating. Application of the following mitigation measures apply:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** None.

## RESOURCE: DEVELOPED RECREATION SITES

**Stipulation:** No Surface Occupancy. Surface occupancy and use is prohibited within ½ mile of the boundaries of developed recreation sites, regardless of administering agency. There currently 49 developed BLM recreation sites: Beartooth Landing Rec Site, Bryant Creek Rec Site, Buffalo Hump Rec Site, Carbella Rec Site, Clark's Bay Rec Site, Crimson Bluff Rec Site, Crow Creek Rec Site, Departure Point Rec Site, Devil's Elbow Rec Site, Dickie Bridge Rec Site, Divide Bridge Campground, Divide Bridge Day Use, East Bank Rec Site, Four Corners OHV Trailhead, French Bar Rec Site, Galena Gulch Rec Site, Headlane Trailhead, Holter Lake Dam Rec Site, Holter Lake Rec Site, Jerry Creek Br Fishing Access, John G Mine Trailhead, Log Gulch Rec Site, Lombard Historical, Lower Toston Rec Site, Maiden Rock East, McMaster Hill East Trailhead, McMaster Hill West Trailhead, Moose Creek Trailhead, Ohio Gulch OHV Trailhead, Pintlar Creek Rec Site, Pipestone OHV Rec Site, Radersburg OHV Trailhead, Ringing Rocks Rec Site, Sawlog Creek Rec Site, Sawmill Gulch Trailhead, Sheep Camp Rec Site, Sheep Mountain Trailhead, Sleeping Giant Trailhead, Spokane Bay Rec Site, Spokane Bay Trailhead, Spokane Hills South, Titan Gulch Rec Site, Toston Dam Rec Site, Tumbleweed Lane Trailhead, Two Camps Vista, Ward Ranch Historical Site, Whiskey Gulch Trailhead, White Sandy Campground, Woodsiding Trailhead.

**Objective:** To recognize and protect the public's opportunity for quality recreation experiences at those sites developed for that purpose. Since BLM recreation sites are generally developed to support the use of the surrounding lands, the 1/2 mile buffer offers some protection for perpetuating those opportunities for which the site was developed, as well as protecting capital investments at the site.

**Exception:** An exception may be granted if a site is moved or eliminated.

**Modification:** The list of developed recreation sites may be modified if development is removed, or if a currently undeveloped site is developed in the future.

**Waiver:** A waiver may be granted if a site is moved or eliminated.

## RESOURCE: SPECIAL RECREATION MANAGEMENT AREAS (SRMAS)

**Stipulation:** No Surface Occupancy. Activity is prohibited within the boundaries of areas designated as SRMAS. This applies to the following SRMAS in this alternative: Holter Lake/Missouri River, Sleeping Giant, Hauser Lake/Lower Missouri River, Toston Reservoir/Missouri River, Scratchgravel Hills, Sheep Mountain, Pipestone, Upper Big Hole River, and Humbug Spires.

**Objective:** To prevent user conflicts and incompatible uses in areas with high recreational values and significant amounts of recreational activity.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan demonstrating the impacts to recreation values and recreation users are acceptable or can be adequately mitigated.

**Modification:** The area affected by this stipulation may be modified by the authorized officer if the boundaries of the SRMA are changed.

**Waiver:** None.

## RESOURCE: CULTURAL AND PALEONTOLOGICAL RESOURCES

**Stipulation:** Controlled Surface Use. An inventory of the leased lands may be required prior to surface disturbance to determine if cultural resources or paleontological localities are present and to identify needed mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator shall:

- 1) Contact the Surface Management Agency (SMA) to determine if a cultural or paleontological resource inventory is required. If an inventory is required, then;
- 2) The SMA will complete the required inventory; or the lessee or operator, at their option, may engage the services of a cultural resource consultant acceptable to the SMA to conduct an inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the planned disturbance to cover possible site relocation, or for planning purposes.
- 3) Implement mitigation measures required by the SMA. Mitigation may include the relocation of proposed lease-related activities or other protective measures such as data recovery and/or extensive recordation.
- 4) The SMA will consult with Native American tribes as per IM 2005 – 003.

The lessee or operator is required to bring to the attention of the field office manager any cultural resources or other objects of scientific interest discovered as a result of approved operations under the lease, and shall leave all discoveries intact and undisturbed until directed to proceed by the field office manager (16 U.S.C. 470).

**Objective:** Compliance with Section 106 of the National Historic Preservation Act is required for all actions which may affect cultural resources eligible for nomination to the National Register of Historic Places. Section 6 of the Oil and Gas Lease Terms (Form 3100-

11) requires that operations be conducted in a manner that minimizes adverse impacts to cultural and other resources.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

### **RESOURCE: NATIONAL REGISTER OF HISTORIC PROPERTIES ELIGIBLE PROPERTIES/DISTRICTS**

**Stipulation:** No Surface Occupancy: Activity is prohibited within 300 feet of site boundaries and/or districts eligible for, or listed on the National Register of Historic Places. There is one known district, the Indian Creek Historic Mining District (134 acres).

**Objective:** To avoid disturbance to and protect, significant properties, districts, and their settings.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the lessee or operator submits a plan which demonstrates that the adverse impacts to cultural properties can be mitigated through data recovery and/or extensive recordation. Where impacts to cultural resources cannot be mitigated to the satisfaction of the SMA, surface occupancy in that area must be prohibited.

**Modification:** No modification will be granted.

**Waiver:** No waiver will be granted.

### **RESOURCE: TRADITIONAL CULTURAL PROPERTIES**

**Stipulation:** No Surface Occupancy: Activity is prohibited within ½ mile, or line-of-site of the identified Traditional Cultural Property (TCP), whichever criterion protects the viewshed of that property.

**Objective:** To avoid disturbance and protect cultural properties determined to be of particular importance to Native American Groups, determined to be Traditional Cultural Properties, and/or designated to be for traditional use.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the Indian community no longer attaches those traditional values to the lease area.

**Modification:** No modification will be granted.

**Waiver:** No waiver will be granted.

### **RESOURCE: VRM CLASS II, III & IV**

**Stipulation:** Controlled Surface Use. All surface disturbing activities and construction of semi-permanent facilities and permanent facilities may require special design including location, painting, and camouflage to

blend with the natural surroundings and meet the visual quality objectives for respective class.

**Objective:** To control the visual impacts of activities and facilities within acceptable levels.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

### **RESOURCE: WETLANDS, FLOODPLAINS, RIPARIAN AREAS, AND WATER QUALITY**

**Stipulation:** No Surface Occupancy. Activity is prohibited within wetlands, floodplains, and riparian areas.

**Objective:** To maintain riparian/wetland functions and water quality.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** None.

**Waiver:** None.

### **RESOURCE: SPECIAL STATUS PLANT HABITATS**

**Stipulation:** Controlled Surface Use. A field inspection will be conducted for special status plant species by the lessee prior to any surface disturbance. A list of special status plant species will be provided to the lessee at the time of the lease. Plant Species on the list are subject to change over time as new information becomes available. Plant inventories must be conducted at a time of year when the target species are identifiable. A report must be provided to the BLM documenting the presence or absence of special status plants in the area proposed for surface disturbance. The findings of this report may result in restrictions to the operator's plans or may preclude use and occupancy.

**Objective:** Protect and conserve rare plants, associated plant communities and the habitat that supports them.

**Exception:** An exception may be granted if BLM determines that the portion of the lease identified for surface disturbing activities does not support special status plant species or provide potential habitat for these species.

**Modification:** The boundaries of the area to be inventoried for special status plants may be modified if BLM determines that a large portion of the lease identified for surface disturbing activities doesn't support special status plant species or provide potential habitat for these species.

**Waiver:** The field inspection and plant inventory may be waived by the authorized if he/she determines that the subject lease occurs in an area with no known populations of special status plant species and that the area doesn't provide habitat for those species.

### **RESOURCE: KNOWN OR DISCOVERED SPECIAL STATUS PLANTS OR POPULATIONS**

**Stipulation:** No Surface Occupancy. Surface occupancy and use is prohibited within ½ mile of special status plant species.

**Objective:** Protect and conserve rare plants, associated plant communities and the habitat that supports them.

**Exception:** None.

**Modification:** The boundaries of the no surface occupancy area may be modified if BLM determines that land within ½ mile of the special status plant population does not provide potential habitat for these species.

**Waiver:** None.

### **RESOURCE: MUNICIPAL WATERSHEDS**

**Stipulation:** No Lease. No leases would be allowed within the following municipal watersheds: Missouri River Siphon, Tenmile Creek Drainage, Big Hole River Intake, and Moulton Reservoir.

**Objective:** To protect drinking water for Municipalities within the Butte Field Office.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

### **RESOURCE: AREAS OF ACTIVE MASS WASTING, UNSTABLE LAND AREAS, SLOPES >30% ON NON-BOULDER BATHOLITH SOILS OR SLOPES >20% ON BOULDER BATHOLITH SOILS**

**Stipulation:** Controlled Surface Use. Prior to surface disturbance on areas of active mass wasting, unstable land areas, slopes greater than 30 on non-Boulder Batholith soils or 20 percent on Boulder Batholith soils, an engineering/reclamation plan must be approved by the authorized officer. Such plan must demonstrate how the following will be accomplished:

- Site productivity will be restored.
- Surface runoff will be adequately controlled.
- Off-site areas will be protected from accelerated soil erosion.

- Surface disturbing activities will not be conducted during extended wet periods.

**Objective:** To maintain soil productivity and provide necessary protection to prevent excessive soil erosion on steep slopes.

**Exceptions:** An exception may be granted if the operator can demonstrate in a plan of operations that adverse effects can be minimized and activities safely conducted.

**Modifications:** The area affected by this stipulation may be modified by the authorized officer if it is determined that portions of area do not include slopes over 30 percent on non-Boulder Batholith soils or 20 percent on Boulder Batholith, or the operator can demonstrate in a plan of operations that adverse effects can be minimized.

**Waiver:** This stipulation may be waived by the authorized officer if it is determined that none of the leasehold contains slopes greater than 30 percent on non-Boulder Batholith soils or 20 percent on Boulder Batholith soils.

### **RESOURCE: DESIGNATED NATIONAL HISTORIC TRAILS – LEWIS AND CLARK TRAIL**

**Stipulation:** No Surface Occupancy. Surface occupancy and use is prohibited within 1 mile of designated National Historic Trail.

**Objective:** To preserve and protect designated National Historic Trails and the natural setting in which they occur.

**Exception:** No exceptions will be granted.

**Modification:** No modifications will be granted.

**Waiver:** No waivers will be granted.

### **RESOURCE: CONTINENTAL DIVIDE NATIONAL SCENIC TRAIL (MARYSVILLE)**

**Stipulation:** No Surface Occupancy. Surface occupancy and use is prohibited within 1/2 mile of the Continental Divide National Scenic Trail.

**Objective:** To preserve and protect the existing scenic character of the landscape along the trail.

**Exception:** May be granted if this portion of the trail is relocated.

**Modification:** Modification may be granted should the trail be relocated.

**Waiver:** May be granted if trail is moved from current location.

## RESOURCE: RIVERS SUITABLE FOR WILD AND SCENIC RIVER DESIGNATION

**Stipulation:** No Surface Occupancy. Activity would be prohibited within 1 mile either side of the active river channel. This stipulation would apply to the following stream/river segment lengths: 2.3 miles of the upper Big Hole River, 3.1 miles of the upper Missouri River, 4.0 miles of Moose Creek, and 2.6 miles of Muskrat Creek.

**Objective:** To protect river corridors considered suitable for inclusion in the National Wild and Scenic Rivers system and the associated outstandingly remarkable values.

**Exception:** None

**Modification:** None

**Waiver:** None

## RESOURCE: RECREATION AND PUBLIC PURPOSES ACT LEASES AND PATENTS, AND 2920 AUTHORIZATIONS

**Stipulation:** No Surface Occupancy (NSO). Surface Occupancy and use is prohibited on Recreation & Public Purposes leases and patents and on leases and permits authorized under regulations found at 43 CFR 2920.

**Objective:** To protect developed facilities and commercial, recreational, and public uses and prevent incompatible uses on existing authorized areas.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan demonstrating that impacts from the proposed action are acceptable or can be adequately mitigated in coordination with the holder of the land use authorization.

**Modification:** The area affected by this stipulation may be modified by the authorized officer if land use authorization boundaries are modified.

**Waiver:** This stipulation may be waived by the authorized officer if land use authorization boundaries are modified.

## ALTERNATIVE D OIL AND GAS STIPULATIONS

### RESOURCE: GRIZZLY BEAR – RECOVERY ZONE

**Stipulation:** Controlled Surface Use. Activities may be relocated, require special design, or require on and off site mitigation measures to prevent impacts to grizzly bear populations and habitat located in the grizzly bear recovery zones.

**Objective:** 1) To ensure that proposed activities do not adversely affect the viability of grizzly bear, operations will be designed, including limiting noise levels and /or located so as to not adversely affect the viability of grizzly bear. 2) To restrict the timing or type of activities on roads, if needed to control human-animal conflicts or disturbances. 3) To require coordination of timing and timing adjustments of activities within grizzly bear recovery zones to avoid or minimize the potential for adverse effects to grizzly bear because of cumulative impacts from oil and gas activities, plus other activities within the area. This stipulation may limit the extent of field development.

**Exception:** An exemption may be granted if the operator demonstrates in a plan of operations that impacts from the proposed action are acceptable or can be adequately mitigated.

**Modification:** None.

**Waiver:** A waiver may be granted if new habitat studies in coordination with MFWP and the USFWS conclude that the area affected by this stipulation is not in grizzly bear occupied habitat.

### RESOURCE: GRIZZLY BEAR - DISTRIBUTION ZONE

**Stipulation:** Controlled Surface Use. Activities may be relocated, require special design, or require on and off site mitigation measures to prevent impacts to grizzly bear populations and habitat located in the grizzly bear distribution zone.

**Objective:** 1) To ensure that proposed activities do not adversely affect the viability of grizzly bear, operations will be designed, including limiting noise levels and /or located so as to not adversely affect the viability of grizzly bear. 2) To restrict the timing or type of activities on roads, if needed to control human-animal conflicts or disturbances. 3) To require coordination of timing and timing adjustments of activities within grizzly bear distribution zones to avoid or minimize the potential for adverse effects to grizzly bear because of cumulative impacts from oil and gas activities, plus other activities within the area. This stipulation may limit the extent of field development.

**Exception:** An exemption may be granted if the operator demonstrates in a plan of operations that impacts from the proposed action are acceptable or can be adequately mitigated.

**Modification:** None.

**Waiver:** A waiver may be granted if new habitat studies in coordination with MFWP and the USFWS conclude that the area affected by this stipulation is not in grizzly bear occupied habitat.

## RESOURCE: GRAY WOLF – FORMER NORTHWEST MONTANA RECOVERY AREA ENDANGERED POPULATION

**Stipulation:** Controlled Surface Use. Activities may be relocated, require special design, or require on and off site mitigation measures to prevent impacts to gray wolf populations and habitat located in the gray wolf former Northwest Montana Recovery Area.

**Objective:** 1) To ensure that proposed activities do not adversely affect the viability of gray wolf, operations will be designed, including limiting noise levels and /or located so as to not adversely affect the viability of gray wolf. 2) To restrict the timing or type of activities on roads, if needed to control human-animal conflicts or disturbances. 3) To require coordination of timing and timing adjustments of activities within the gray wolf former Northwest Montana Recovery Area to avoid or minimize the potential for adverse effects to gray wolf because of cumulative impacts from oil and gas activities, plus other activities within the area. This stipulation may limit the extent of field development.

**Exception:** An exemption may be granted if the operator demonstrates in a plan of operations that impacts from the proposed action are acceptable or can be adequately mitigated.

**Modification:** None.

**Waiver:** A waiver may be granted if new habitat studies in coordination with MFWP and the USFWS conclude that the area affected by this stipulation is not in gray wolf occupied habitat.

## RESOURCE: PRAIRIE DOG TOWNS

**Stipulation:** No Surface Occupancy. Activity is prohibited within the boundary of any prairie dog town.

**Objective:** To protect habitat for prairie dog towns.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan which demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting prairie dogs.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP and USFWS, determines that the entire leasehold no longer contains prairie dogs.

## RESOURCE: SAGE GROUSE WINTER/SPRING RANGE

**Stipulation:** Timing Limitation. No activity from December 1 through May 15. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect sage grouse winter range from disturbance during the winter/spring season, and to facilitate long-term maintenance of wildlife populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer in consultation with MFWP and the USFWS, if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer contain sage grouse winter/spring range. The dates for the timing restriction may be modified if new information indicates that the December 1 through May 15 dates are not valid for the leasehold.

**Waiver:** This stipulation may be waived if the authorized officer determines that the entire leasehold no longer contains sage grouse winter/spring range, or if in coordination with MFWP and the USFWS, determines that the area is not critical for sage grouse.

## RESOURCE: SAGE GROUSE STRUTTING GROUNDS (LEKS)

**Stipulation:** No Surface Occupancy. Activity is prohibited within 1/4 mile of sage grouse leks.

**Objective:** To protect sage grouse strutting grounds and leks to maintain regional sage grouse populations.

**Exception:** An exception to this stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks.

**Waiver:** The stipulation may be waived if the authorized officer, in consultation with MFWP and the USFWS, determines that the entire leasehold can be occupied without adversely affecting sage grouse leks.

## RESOURCE: SAGE GROUSE BREEDING HABITAT

**Stipulation:** Timing Limitation. Activity is restricted from March 1 through June 30 in nesting and early brood rearing habitat (defined as within three miles of leks). This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect sage grouse leks and breeding habitat necessary for long-term maintenance of regional sage grouse populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP, determines that the entire leasehold can be occupied without adversely affecting sage grouse leks or the surrounding breeding habitat.

## RESOURCE: WILDLIFE MANAGEMENT AREAS

**Stipulation:** No Surface Occupancy. Activity is prohibited within the boundary of State Game Ranges administered by MFWP.

**Objective:** To protect MFWP elk winter range necessary for long-term maintenance of regional elk populations and other wildlife values.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

## RESOURCE: BIG GAME WINTER/SPRING RANGE

**Stipulation:** Timing Limitation. No activity from December 1 through May 15 within winter range for wildlife. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect mule deer, elk, antelope, and moose winter/spring range from disturbance during the

winter/spring season, and to facilitate long-term maintenance of wildlife populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer in consultation with MFWP, if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in consultation with MFWP, determines that portions of the area no longer contain wildlife winter/spring range. The dates for the timing restriction may be modified if new wildlife use information indicates that the December 1 through May 15 dates are not valid for the leasehold.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP, determines that the entire leasehold no longer contains winter/spring range for wildlife.

## RESOURCE: BIGHORN SHEEP YEARLONG RANGE

**Stipulation:** Timing Limitation. Activity is prohibited from November 1 through June 30 in bighorn rutting, winter and lambing habitat. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect bighorn rutting, winter and lambing habitat from disturbance and facilitate long-term maintenance of bighorn sheep populations.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer contain rutting, winter, and lambing habitat for bighorn sheep. The dates for the timing restriction may be modified if new wildlife use information indicates that the dates are not valid for the leasehold.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with MFWP, determines that the entire leasehold no longer contains bighorn sheep rutting, winter or lambing areas.

## RESOURCE: BALD EAGLE NEST SITES/BREEDING HABITAT

**Stipulation:** No Surface Occupancy. Activity is prohibited within 1/2 mile of bald eagle nest sites and within bald eagle nesting habitat in riparian areas.

**Objective:** To protect bald eagle nesting sites and/or breeding habitat in accordance with the Montana Bald Eagle Management Plan.

**Exception:** An exception may be granted by the authorized officer if the operator submits a plan which demonstrates that the proposed action will not affect the bald eagle or its habitat. If the authorized officer determines that the action may have an adverse affect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by BLM in consultation with the USFWS.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in consultation with USFWS, determines that the area can be occupied without adversely affecting bald eagle nest sites or nesting habitats.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with USFWS, determines that the entire leasehold can be occupied without adversely affecting bald eagle nest sites or nesting habitat.

### **RESOURCE: BALD EAGLE NEST SITES/BREEDING HABITAT**

**Stipulation:** Timing Limitation. No activity is allowed from February 1 through August 31 in a one mile radius around bald eagle nest sites. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To protect bald eagle nesting site and/or breeding habitat in accordance with the Montana Bald Eagle Management Plan.

**Exception:** An exception may be granted by the authorized officer if the operator submits a plan which demonstrates that the proposed action will not affect the bald eagle or its habitat. If the authorized officer determines that the action may have an adverse affect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by BLM in consultation with the USFWS.

**Modification:** A modification may be granted if new habitat studies show that a portion of the area is not used by eagles.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with USFWS, determines that the entire leasehold can be occupied without adversely affecting bald eagle nest sites or nesting habitat.

### **RESOURCE: PEREGRINE FALCON NEST SITES/BREEDING HABITAT**

**Stipulation:** No Surface Occupancy. Activity is prohibited within one mile of peregrine falcon nest sites.

**Objective:** To protect peregrine falcon nesting sites and/or breeding habitat.

**Exception:** An exception may be granted by the authorized officer if the operator submits a plan that demonstrates that the proposed action will not affect the peregrine falcon or its habitat. If the authorized officer determines that the action may have an adverse affect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by BLM in consultation with USFWS.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in consultation with USFWS, determines that portions of the area can be occupied without adversely affecting peregrine falcon nest sites or breeding habitat.

**Waiver:** This stipulation may be waived if the authorized officer, in consultation with USFWS, determines that the entire leasehold can be occupied without adversely affecting peregrine falcon nest sites or breeding habitat.

### **RESOURCE: FERRUGINOUS HAWK BREEDING TERRITORIES**

**Stipulation:** Timing Limitation. No activity is allowed from March 1 through July 31 within 1/2 mile of ferruginous hawk nest sites that have been active within the past 5 years. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

**Objective:** To maintain the reproductive potential of ferruginous hawk nest sites.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrated that the impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting the production potential of ferruginous hawk nest sites.

**Waiver:** This stipulation may be waived if the authorized officer determines that the entire leasehold can be occupied without adversely affecting the production potential of ferruginous hawk nest sites.

## **RESOURCE: THREATENED, ENDANGERED, AND SPECIAL STATUS SPECIES**

**Stipulation:** Controlled Surface Use. The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or requirements of the Endangered Species Act as amended, 16 U.S.C. § 1531 et seq., including completion of any required procedure for conference or consultation.

**Objective:** Avoid BLM-approved activity that will contribute to a need to list a species or their habitat as threatened or endangered.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

## **RESOURCE: WESTSLOPE CUTTHROAT TROUT HABITAT (90-99% PURE)**

**Stipulation:** Controlled Surface Use. Activities within 1/2 mile of streams containing populations of westslope cutthroat trout with purity of 90-99% may be relocated, require special design, or require on and off site mitigation measures to prevent impacts to sensitive trout populations.

**Objective:** To ensure healthy aquatic habitat exists in drainages important to the viability of Upper Missouri River and Columbia River Basins Westslope Cutthroat Trout.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive trout populations. Apply the following mitigation measures:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** A waiver may be granted if the MFWP determines the stream is no longer considered important to the viability of the species.

## **RESOURCE: WESTSLOPE CUTTHROAT TROUT HABITAT (99-100% PURE)**

**Stipulation:** No Surface Occupancy. No activity allowed within 1/2 mile from centerline of stream containing known populations of 99-100% genetically pure westslope cutthroat trout.

**Objective:** To prevent sensitive aquatic habitat and trout populations from being impacted.

**Exception:** An exemption may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive trout populations. Apply the following mitigation measures:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modifications:** None.

**Waiver:** A waiver may be granted if the MFWP determines the stream is no longer considered important to the viability of the species.

## **RESOURCE: FLUVIAL AND ADFLUVIAL ARCTIC GRAYLING HABITAT**

**Stipulation:** Controlled Surface Use. Activities may be relocated, require special design, or require on and off site mitigation measures to prevent impacts to grayling populations and habitat located in the Big Hole.

**Objective:** To ensure healthy aquatic habitat exists along rivers and tributaries important to the viability of fluvial and adfluvial Arctic grayling.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect Arctic grayling populations. The following mitigation measures would apply:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** A waiver may be granted if the MFWP and the USFWS determines the stream is no longer considered important to the viability of the species.

## **RESOURCE: BULL TROUT**

**Stipulation:** No Surface Occupancy. No activity allowed within 1/2 mile from centerline of streams containing known populations of bull trout.

**Objective:** To ensure healthy aquatic habitat exists in drainages important to the viability of bull trout.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive trout populations. Apply the following mitigation measures:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** A waiver may be granted if the MFWP and the USFWS determines the stream is no longer considered important to the viability of the species.

### **RESOURCE: YELLOWSTONE CUTTHROAT (90-100% PURE)**

**Stipulation:** Controlled Surface Use. Activities may be relocated, require special design, or require on and off site mitigation measures to prevent impacts to 90-100% genetically pure Yellowstone cutthroat trout populations and habitat located in the Yellowstone Watershed.

**Objective:** To ensure healthy aquatic habitat exists in drainages important to the viability of Yellowstone Cutthroat.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that adverse effects can be eliminated and activities would not affect sensitive trout populations. The following mitigation measures would apply:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** A waiver may be granted if the MFWP and the USFWS determines the stream is no longer considered important to the viability of the species.

### **RESOURCE: CLASS 1 FISHERIES**

**Stipulation:** Controlled Surface Use. Activities may be relocated, require special design, or require on and off site mitigation measures to protect Class 1 fishery streams (Blue Ribbon trout streams).

**Objective:** To ensure healthy aquatic habitat are maintained along Class 1 fisheries.

**Exception:** An exception may be granted if MFWP modifies the Class 1 fisheries rating. Application of the following mitigation measures apply:

- a) No net increase in sediment over existing condition.
- b) No adverse effects on water quality and quantity.

**Modification:** None.

**Waiver:** None.

### **RESOURCE: DEVELOPED RECREATION SITES**

**Stipulation:** Controlled Surface Use. Activities within ¼ mile of developed recreation sites (regardless of administering agency) must be conducted in a manner to minimize surface disturbance, avoid facilities, and minimize impacts with other public land users. There are currently 49 developed BLM recreation sites: Beartooth Landing Rec Site, Bryant Creek Rec Site, Buffalo Hump Rec Site, Carbella Rec Site, Clark's Bay Rec Site, Crimson Bluff Rec Site, Crow Creek Rec Site, Departure Point Rec Site, Devil's Elbow Rec Site, Dickie Bridge Rec Site, Divide Bridge Campground, Divide Bridge Day Use, East Bank Rec Site, Four Corners OHV Trailhead, French Bar Rec Site, Galena Gulch Rec Site, Headlane Trailhead, Holter Lake Dam Rec Site, Holter Lake Rec Site, Jerry Creek Br Fishing Access, John G Mine Trailhead, Log Gulch Rec Site, Lombard Historical, Lower Toston Rec Site, Maiden Rock East, McMaster Hill East Trailhead, McMaster Hill West Trailhead, Moose Creek Trailhead, Ohio Gulch OHV Trailhead, Pintlar Creek Rec Site, Pipestone OHV Rec Site, Radersburg OHV Trailhead, Ringing Rocks Rec Site, Sawlog Creek Rec Site, Sawmill Gulch Trailhead, Sheep Camp Rec Site, Sheep Mountain Trailhead, Sleeping Giant Trailhead, Spokane Bay Rec Site, Spokane Bay Trailhead, Spokane Hills South, Titan Gulch Rec Site, Toston Dam Rec Site, Tumbleweed Lane Trailhead, Two Camps Vista, Ward Ranch Historical Site, Whiskey Gulch Trailhead, White Sandy Campground, Woodsiding Trailhead.

**Objective:** To recognize and protect the public's opportunity for quality recreation experiences at those sites developed for that purpose. A ¼ mile buffer would protect capital investment and, to some extent, visitors' recreation experiences while at the site.

**Exception:** An exception may be granted if a site is moved or eliminated.

**Modification:** The list of developed recreation sites may be modified if development is removed, or if a currently undeveloped site is developed in the future.

**Waiver:** A waiver may be granted if a site is moved or eliminated.

### **RESOURCE: CULTURAL AND PALEONTOLOGICAL RESOURCES**

**Stipulation:** Controlled Surface Use. An inventory of the leased lands may be required prior to surface disturbance to determine if cultural resources or paleontological localities are present and to identify needed mitigation measures. Prior to undertaking any

surface-disturbing activities on the lands covered by this lease, the lessee or operator shall:

- 1) Contact the Surface Management Agency to determine if a cultural or paleontological resource inventory is required. If an inventory is required, then;
- 2) The SMA will complete the required inventory; or the lessee or operator, at their option, may engage the services of a cultural resource consultant acceptable to the SMA to conduct an inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the planned disturbance to cover possible site relocation, or for planning purposes.
- 3) Implement mitigation measures required by the SMA. Mitigation may include the relocation of proposed lease-related activities or other protective measures such as data recovery and/or extensive recordation.
- 4) The SMA will consult with Native American tribes as per IM 2005 – 003.

The lessee or operator is required to bring to the attention of the field office manager any cultural resources or other objects of scientific interest discovered as a result of approved operations under the lease, and shall leave all discoveries intact and undisturbed until directed to proceed by the field office manager (16 U.S.C. 470).

**Objective:** Compliance with Section 106 of the National Historic Preservation Act is required for all actions which may affect cultural resources eligible for nomination to the National Register of Historic Places. Section 6 of the Oil and Gas Lease Terms (Form 3100-11) requires that operations be conducted in a manner that minimizes adverse impacts to cultural and other resources.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

### **RESOURCE: NATIONAL REGISTER OF HISTORIC PROPERTIES ELIGIBLE PROPERTIES/DISTRICTS**

**Stipulation:** No Surface Occupancy: Activity is prohibited within 300 feet of site boundaries and/or districts eligible for, or listed on the National Register of Historic Places. There is one known district, the Indian Creek Historic Mining District (134 acres).

**Objective:** To avoid disturbance to and protect, significant properties, districts, and their settings.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the lessee or operator submits a plan which demonstrates that the adverse

impacts to cultural properties can be mitigated through data recovery and/or extensive recordation. Where impacts to cultural resources cannot be mitigated to the satisfaction of the Surface Management Agency, surface occupancy in that area must be prohibited.

**Modification:** No modification will be granted.

**Waiver:** No waiver will be granted.

### **RESOURCE: TRADITIONAL CULTURAL PROPERTIES**

**Stipulation:** No Surface Occupancy: Activity is prohibited within ½ mile, or line-of-site of the identified Traditional Cultural Property, whichever criterion protects the viewshed of that property.

**Objective:** To avoid disturbance and protect cultural properties determined to be of particular importance to Native American Groups, determined to be Traditional Cultural Properties, and/or designated to be for traditional use.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the Indian community no longer attaches those traditional values to the lease area.

**Modification:** No modification will be granted.

**Waiver:** No waiver will be granted.

### **RESOURCE: WETLANDS, FLOODPLAINS, RIPARIAN AREAS, AND WATER QUALITY**

**Stipulation:** No Surface Occupancy. Activity is prohibited within wetlands, floodplains, and riparian areas.

**Objective:** To maintain riparian/wetland functions and water quality.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated.

**Modification:** None.

**Waiver:** None.

### **RESOURCE: SPECIAL STATUS PLANT HABITATS**

**Stipulation:** Controlled Surface Use. A field inspection will be conducted for special status plant species by the lessee prior to any surface disturbance. A list of special status plant species will be provided to the lessee at the time of the lease. Plant Species on the list are subject to change over time as new information becomes available. Plant inventories must be conducted at a time of year when the target species are identifiable. A report must be

provided to the BLM documenting the presence or absence of special status plants in the area proposed for surface disturbance. The findings of this report may result in restrictions to the operator's plans or may preclude use and occupancy.

**Objective:** Protect and conserve rare plants, associated plant communities and the habitat that supports them.

**Exception:** An exception may be granted if BLM determines that the portion of the lease identified for surface disturbing activities does not support special status plant species or provide potential habitat for these species.

**Modification:** The boundaries of the area to be inventoried for special status plants may be modified if BLM determines that a large portion of the lease identified for surface disturbing activities doesn't support special status plant species or provide potential habitat for these species.

**Waiver:** The field inspection and plant inventory may be waived by the authorized if he/she determines that the subject lease occurs in an area with no known populations of special status plant species and that the area doesn't provide habitat for those species.

## **RESOURCE: KNOWN OR DISCOVERED SPECIAL STATUS PLANTS OR POPULATIONS**

**Stipulation:** No Surface Occupancy. Surface occupancy and use is prohibited within special status plant population locations.

**Objective:** Protect and conserve rare plants, associated plant communities and the habitat that supports them.

**Exception:** None.

**Modification:** None.

**Waiver:** None.

## **RESOURCE: MUNICIPAL WATERSHEDS**

**Stipulation:** Controlled Surface Use. All lease operations will avoid negative impacts to water at the intakes of the following municipal watersheds that overlap portions of the lease: Missouri River Siphon, Tennile Creek Drainage, Big Hole River Intake, and Moulton Reservoir. Measures may include relocation of proposed roads, drilling sites and other facilities, or application of appropriate mitigating measures mentioned in the list of conditions attached to the APD.

**Objective:** To protect drinking water for Municipalities within the Butte Field Office.

**Exception:** An exception may be granted after a site assessment is conducted and if the operator can demonstrate in a surface use plan of operations that water quality at intakes will meet drinking water standards established by MDEQ.

**Modification:** The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied and water quality at intakes will meet drinking water standards established by MDEQ.

**Waiver:** This stipulation may be waived if the authorized officer determines that operations will not cause water quality at intakes to fail to meet drinking water standards established by MDEQ.

## **RESOURCE: RECREATION AND PUBLIC PURPOSES ACT LEASES AND PATENTS, AND 2920 AUTHORIZATIONS**

**Stipulation:** No Surface Occupancy. Surface Occupancy and use is prohibited on Recreation & Public Purposes leases and patents and on leases and permits authorized under regulations found at 43 CFR 2920.

**Objective:** To protect developed facilities and commercial, recreational, and public uses and prevent incompatible uses on existing authorized areas.

**Exception:** An exception to this stipulation may be granted by the authorized officer if the operator submits a plan demonstrating that impacts from the proposed action are acceptable or can be adequately mitigated in coordination with the holder of the land use authorization.

**Modification:** The area affected by this stipulation may be modified by the authorized officer if land use authorization boundaries are modified.

**Waiver:** This stipulation may be waived by the authorized officer if land use authorization boundaries are modified.

## **ADDITIONAL INFORMATION**

- Form 3100-11: Offer to Lease and Lease for Oil and Gas
- Form 3109-1: Lease Stipulations
- Form GP-135: Special Stipulation Bureau of Reclamation

Form 3100-11  
(July 2006)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Serial Number

OFFER TO LEASE AND LEASE FOR OIL AND GAS

The undersigned (page 2) offers to lease all or any of the lands in Item 2 that are available for lease pursuant to the Mineral Lands Leasing Act of 1920, as amended and supplemented (30 U.S.C. 181 et seq.), the Mineral Leasing Act for Acquired Lands of 1947, as amended (30 U.S.C. 351-359), or \_\_\_\_\_ (other).

READ INSTRUCTIONS BEFORE COMPLETING

1. Name

Street

City, State, Zip Code

2. This application/offer/lease is for: (Check Only One)  PUBLIC DOMAIN LANDS  ACQUIRED LANDS (percent U.S. interest \_\_\_\_\_)

Surface managing agency if other than Bureau of Land Management (BLM): \_\_\_\_\_ Unit/Project \_\_\_\_\_

Legal description of land requested: \*Parcel No.: \_\_\_\_\_ \*Sale Date (mm/dd/yyyy): \_\_\_\_\_

**\*See Item 2 in Instructions below prior to completing Parcel Number and Sale Date.**

T.                      R.                      Meridian                      State                      County

Amount remitted: Filing fee \$ \_\_\_\_\_ Rental fee \$ \_\_\_\_\_ Total acres applied for \_\_\_\_\_  
Total \$ \_\_\_\_\_

DO NOT WRITE BELOW THIS LINE

3. Land included in lease:

T.                      R.                      Meridian                      State                      County

Total acres in lease \_\_\_\_\_

Rental retained \$ \_\_\_\_\_

This lease is issued granting the exclusive right to drill for, mine, extract, remove and dispose of all the oil and gas (except helium) in the lands described in Item 3 together with the right to build and maintain necessary improvements thereupon for the term indicated below, subject to renewal or extension in accordance with the appropriate leasing authority. Rights granted are subject to applicable laws, the terms, conditions, and attached stipulations of this lease, the Secretary of the Interior's regulations and formal orders in effect as of lease issuance, and to regulations and formal orders hereafter promulgated when not inconsistent with lease rights granted or specific provisions of this lease.

**NOTE: This lease is issued to the high bidder pursuant to his/her duly executed bid or nomination form submitted under 43 CFR 3120 and is subject to the provisions of that bid or nomination and those specified on this form.**

Type and primary term:

THE UNITED STATES OF AMERICA

Noncompetitive lease (ten years)

by \_\_\_\_\_  
(BLM)

Competitive lease (ten years)

\_\_\_\_\_  
(Title)                      (Date)

Other \_\_\_\_\_ EFFECTIVE DATE OF LEASE \_\_\_\_\_

(Continued on page 2)

4. (a) Undersigned certifies that (1) offeror is a citizen of the United States; an association of such citizens; a municipality; or a corporation organized under the laws of the United States or of any State or Territory thereof, (2) all parties holding an interest in the offer are in compliance with 43 CFR 3100 and the leasing authorities; (3) offeror's chargeable interests, direct and indirect, in each public domain and acquired lands separately in the same State, do not exceed 246,080 acres in oil and gas leases (of which up to 200,000 acres may be in oil and gas options or 300,000 acres in leases in each leasing District in Alaska of which up to 200,000 acres may be in options, (4) offeror is not considered a minor under the laws of the State in which the lands covered by this offer are located; (5) offeror is in compliance with qualifications concerning Federal coal lease holdings provided in sec. 2(a)2(A) of the Mineral Leasing Act; (6) offeror is in compliance with reclamation requirements for all Federal oil and gas lease holdings as required by sec. 17(g) of the Mineral Leasing Act; and (7) offeror is not in violation of sec. 41 of the Act. (b) Undersigned agrees that signature to this offer constitutes acceptance of this lease, including all terms conditions, and stipulations of which offeror has been given notice, and any amendment or separate lease that may include any land described in this offer open to leasing at the time this offer was filed but omitted for any reason from this lease. The offeror further agrees that this offer cannot be withdrawn, either in whole or in part unless the withdrawal is received by the proper BLM State Office before this lease, an amendment to this lease, or a separate lease, whichever covers the land described in the withdrawal, has been signed on behalf of the United States.

**This offer will be rejected and will afford offeror no priority if it is not properly completed and executed in accordance with the regulations, or if it is not accompanied by the required payments.**

Duly executed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ (Signature of Lessee or Attorney-in-fact)

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Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212 make it a crime for any person knowingly and willfully to make to any department or Agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

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#### LEASE TERMS

Sec. 1. Rentals--Rentals must be paid to proper office of lessor in advance of each lease year. Annual rental rates per acre or fraction thereof are:

- (a) Noncompetitive lease, \$1.50 for the first 5 years; thereafter \$2.00;
- (b) Competitive lease, \$1.50; for the first 5 years; thereafter \$2.00;
- (c) Other, see attachment, or

as specified in regulations at the time this lease is issued.

If this lease or a portion thereof is committed to an approved cooperative or unit plan which includes a well capable of producing leased resources, and the plan contains a provision for allocation of production, royalties must be paid on the production allocated to this lease. However, annual rentals must continue to be due at the rate specified in (a), (b), or (c) rentals for those lands not within a participating area.

Failure to pay annual rental, if due, on or before the anniversary date of this lease (or next official working day if office is closed) must automatically terminate this lease by operation of law. Rentals may be waived, reduced, or suspended by the Secretary upon a sufficient showing by lessee.

Sec. 2. Royalties--Royalties must be paid to proper office of lessor. Royalties must be computed in accordance with regulations on production removed or sold. Royalty rates are:

- (a) Noncompetitive lease, 12 1/2%;
- (b) Competitive lease, 12 1/2 %;
- (c) Other, see attachment; or

as specified in regulations at the time this lease is issued.

Lessor reserves the right to specify whether royalty is to be paid in value or in kind, and the right to establish reasonable minimum values on products after giving lessee notice and an opportunity to be heard. When paid in value, royalties must be due and payable on the last day of the month following the month in which production occurred. When paid in kind, production must be delivered, unless otherwise agreed to by lessor, in merchantable condition on the premises where produced without cost to lessor. Lessee must not be required to hold such production in storage beyond the last day of the month following the month in which production occurred, nor must lessee be held liable for loss or destruction of royalty oil or other products in storage from causes beyond the reasonable control of lessee.

Minimum royalty in lieu of rental of not less than the rental which otherwise would be required for that lease year must be payable at the end of each lease year beginning on or after a discovery in paying quantities. This minimum royalty may be waived, suspended, or reduced, and the above royalty rates may be reduced, for all or portions of this lease if the Secretary determines that such action is necessary to encourage the greatest ultimate recovery of the leased resources, or is otherwise justified.

An interest charge will be assessed on late royalty payments or underpayments in accordance with the Federal Oil and Gas Royalty Management Act of 1982 (FOGRMA) (30 U.S.C. 1701). Lessee must be liable for royalty payments on oil and gas lost or wasted from a lease site when such loss or waste is due to negligence on the part of the operator, or due to the failure to comply with any rule, regulation, order, or citation issued under FOGRMA or the leasing authority.

(Continued on page 3)

(Form 3100-11, page 2)

Sec. 3. Bonds - A bond must be filed and maintained for lease operations as required under regulations.

Sec. 4. Diligence, rate of development, unitization, and drainage - Lessee must exercise reasonable diligence in developing and producing, and must prevent unnecessary damage to, loss of, or waste of leased resources. Lessor reserves right to specify rates of development and production in the public interest and to require lessee to subscribe to a cooperative or unit plan, within 30 days of notice, if deemed necessary for proper development and operation of area, field, or pool embracing these leased lands. Lessee must drill and produce wells necessary to protect leased lands from drainage or pay compensatory royalty for drainage in amount determined by lessor.

Sec. 5. Documents, evidence, and inspection - Lessee must file with proper office of lessor, not later than 30 days after effective date thereof, any contract or evidence of other arrangement for sale or disposal of production. At such times and in such form as lessor may prescribe, lessee must furnish detailed statements showing amounts and quality of all products removed and sold, proceeds therefrom, and amount used for production purposes or unavoidably lost. Lessee may be required to provide plats and schematic diagrams showing development work and improvements, and reports with respect to parties in interest, expenditures, and depreciation costs. In the form prescribed by lessor, lessee must keep a daily drilling record, a log, information on well surveys and tests, and a record of subsurface investigations and furnish copies to lessor when required. Lessee must keep open at all reasonable times for inspection by any representative of lessor, the leased premises and all wells, improvements, machinery, and fixtures thereon, and all books, accounts, maps, and records relative to operations, surveys, or investigations on or in the leased lands. Lessee must maintain copies of all contracts, sales agreements, accounting records, and documentation such as billings, invoices, or similar documentation that supports costs claimed as manufacturing, preparation, and/or transportation costs. All such records must be maintained in lessee's accounting offices for future audit by lessor. Lessee must maintain required records for 6 years after they are generated or, if an audit or investigation is underway, until released of the obligation to maintain such records by lessor.

During existence of this lease, information obtained under this section will be closed to inspection by the public in accordance with the Freedom of Information Act (5 U.S.C. 552).

Sec. 6. Conduct of operations - Lessee must conduct operations in a manner that minimizes adverse impacts to the land, air, and water, to cultural, biological, visual, and other resources, and to other land uses or users. Lessee must take reasonable measures deemed necessary by lessor to accomplish the intent of this section. To the extent consistent with lease rights granted, such measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures. Lessor reserves the right to continue existing uses and to authorize future uses upon or in the leased lands, including the approval of easements or rights-of-way. Such uses must be conditioned so as to prevent unnecessary or unreasonable interference with rights of lessee.

Prior to disturbing the surface of the leased lands, lessee must contact lessor to be apprised of procedures to be followed and modifications or reclamation measures that may be necessary. Areas to be disturbed may require inventories or special studies to determine the extent of impacts to other resources. Lessee may be required to complete minor inventories or short term special studies under guidelines provided by lessor. If in the conduct of operations, threatened or endangered species, objects of historic or scientific interest, or substantial unanticipated environmental effects are observed, lessee must immediately contact lessor. Lessee must cease any operations that would result in the destruction of such species or objects.

Sec. 7. Mining operations - To the extent that impacts from mining operations would be substantially different or greater than those associated with normal drilling operations, lessor reserves the right to deny approval of such operations.

Sec. 8. Extraction of helium - Lessor reserves the option of extracting or having extracted helium from gas production in a manner specified and by means provided by lessor at no expense or loss to lessee or owner of the gas. Lessee must include in any contract of sale of gas the provisions of this section.

Sec. 9. Damages to property - Lessee must pay lessor for damage to lessor's improvements, and must save and hold lessor harmless from all claims for damage or harm to persons or property as a result of lease operations.

Sec. 10. Protection of diverse interests and equal opportunity - Lessee must pay, when due, all taxes legally assessed and levied under laws of the State or the United States; accord all employees complete freedom of purchase; pay all wages at least twice each month in lawful money of the United States; maintain a safe working environment in accordance with standard industry practices; and take measures necessary to protect the health and safety of the public.

Lessor reserves the right to ensure that production is sold at reasonable prices and to prevent monopoly. If lessee operates a pipeline, or owns controlling interest in a pipeline or a company operating a pipeline, which may be operated accessible to oil derived from these leased lands, lessee must comply with section 28 of the Mineral Leasing Act of 1920.

Lessee must comply with Executive Order No. 11246 of September 24, 1965, as amended, and regulations and relevant orders of the Secretary of Labor issued pursuant thereto. Neither lessee nor lessee's subcontractors must maintain segregated facilities.

Sec. 11. Transfer of lease interests and relinquishment of lease - As required by regulations, lessee must file with lessor any assignment or other transfer of an interest in this lease. Lessee may relinquish this lease or any legal subdivision by filing in the proper office a written relinquishment, which will be effective as of the date of filing, subject to the continued obligation of the lessee and surety to pay all accrued rentals and royalties.

Sec. 12. Delivery of premises - At such time as all or portions of this lease are returned to lessor, lessee must place affected wells in condition for suspension or abandonment, reclaim the land as specified by lessor and, within a reasonable period of time, remove equipment and improvements not deemed necessary by lessor for preservation of producible wells.

Sec. 13. Proceedings in case of default - If lessee fails to comply with any provisions of this lease, and the noncompliance continues for 30 days after written notice thereof, this lease will be subject to cancellation unless or until the leasehold contains a well capable of production of oil or gas in paying quantities, or the lease is committed to an approved cooperative or unit plan or communitization agreement which contains a well capable of production of unitized substances in paying quantities. This provision will not be construed to prevent the exercise by lessor of any other legal and equitable remedy, including waiver of the default. Any such remedy or waiver will not prevent later cancellation for the same default occurring at any other time. Lessee will be subject to applicable provisions and penalties of FOGRMA (30 U.S.C. 1701).

Sec. 14. Heirs and successors-in-interest - Each obligation of this lease will extend to and be binding upon, and every benefit hereof will inure to the heirs, executors, administrators, successors, beneficiaries, or assignees of the respective parties hereto.

(Continued on page 4)

(Form 3100-11, page 3)

## A. General:

1. Page 1 of this form is to be completed only by parties filing for a noncompetitive lease. The BLM will complete page 1 of the form for all other types of leases.
2. Entries must be typed or printed plainly in ink. Offeror must sign Item 4 in ink.
3. An original and two copies of this offer must be prepared and filed in the proper BLM State Office. See regulations at 43 CFR 1821.2-1 for office locations.
4. If more space is needed, additional sheets must be attached to each copy of the form submitted.

## B. Special:

Item 1 - Enter offeror's name and billing address.

Item 2 - Identify the mineral status and, if acquired lands, percentage of Federal ownership of applied for minerals. Indicate the agency controlling the surface of the land and the name of the unit or project which the land is a part. The same offer may not include both Public

Domain and Acquired lands. Offeror also may provide other information that will assist in establishing title for minerals. The description of land must conform to 43 CFR 3110. A single parcel number and Sale Date will be the only acceptable description during the period from the first day following the end of a competitive process until the end of that same month, using the parcel number on the List of Lands Available for Competitive Nominations or the Notice of Competitive Lease Sale, whichever is appropriate.

Payments: The amount remitted must include the filing fee and the first year's rental at the rate of \$1.50 per acre or fraction thereof. The full rental based on the total acreage applied for must accompany an offer even if the mineral interest of the United States is less than 100 percent. The filing fee will be retained as a service charge even if the offer is completely rejected or withdrawn. To protect priority, it is important that the rental submitted be sufficient to cover all the land requested. If the land requested includes lots or irregular quarter-quarter sections, the exact area of which is not known to the offeror, rental should be submitted on the basis of each such lot or quarter-quarter section containing 40 acres. If the offer is withdrawn or rejected in whole or in part before a lease issues, the rental remitted for the parts withdrawn or rejected will be returned.

Item 3 - This space will be completed by the United States.

## NOTICES

The Privacy Act of 1974 and the regulations in 43 CFR 2.48(d) provide that you be furnished with the following information in connection with information required by this oil and gas lease offer.

AUTHORITY: 30 U.S.C. 181 et seq.; 30 U.S.C 351-359.

PRINCIPAL PURPOSE: The information is to be used to process oil and gas offers and leases.

ROUTINE USES: (1) The adjudication of the lessee's rights to the land or resources. (2) Documentation for public information in support of notations made on land status records for the management, disposal, and use of public lands and resources. (3) Transfer to appropriate Federal agencies when consent or concurrence is required prior to granting a right in public lands or resources. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions.

EFFECT OF NOT PROVIDING INFORMATION: If all the information is not provided, the offer may be rejected. See regulations at 43 CFR 3100.

The Paperwork Reduction Act of 1995 requires us to inform you that:

This information is being collected pursuant to the law.

This information will be used to create and maintain a record of oil and gas lease activity.

Response to this request is required to obtain a benefit.

BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 1 hour per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0185), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop, 401LS, Washington, D.C. 20240.

Form 3109-1  
(December 1972)  
(formerly 3103-1)

**LEASE STIPULATIONS**  
**BUREAU OF RECLAMATION**

The lessee agrees to maintain, if required by the lessor during the period of this lease, including any extension thereof, an additional bond with qualified sureties in such sum as the lessor, if it considers that the bond required under Section 2(a) is insufficient, may at any time require:

(a) to pay for damages sustained by any reclamation homestead entryman to his crops or improvements caused by drilling or other operations of the lessee, such damages to include the reimbursement of the entryman by the lessee, when he uses or occupies the land of any homestead entryman, for all construction and operation and maintenance charges becoming due during such use or occupation upon any portion of the land so used and occupied;

(b) to pay any damage caused to any reclamation project or water supply thereof by the lessee's failure to comply fully with the requirements of this lease; and

(c) to recompense any nonmineral applicant, entryman, purchaser under the Act of May 16, 1930 (46 Stat. 367), or patentee for all damages to crops or to tangible improvements caused by drilling or other prospecting operation, where any of the lands covered by this lease are embraced in any nonmineral application, entry, or patent under rights initiated prior to the date of this lease, with a reservation of the oil deposits, to the United States pursuant to the Act of July 17, 1914 (38 Stat. 509).

As to any lands covered by this lease within the area of any Government reclamation project, or in proximity thereto, the lessee shall take such precautions as required by the irrigation under such project or to the water supply thereof; *provided* that drilling is prohibited on any constructed works or right-of-way of the Bureau of Reclamation, and *provided, further*, that there is reserved to the lessor, its successors and assigns, the superior and prior right at all times to construct, operate, and maintain dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, appurtenant irrigation structures, and reclamation works, in which construction, operation, and maintenance, the lessor, its successors and assigns, shall have the right to use any or all of the lands herein described without making compensation therefore, and shall not be responsible for any damage from the presence of water thereon or on account of ordinary, extraordinary, unexpected, or unprecedented floods. That nothing shall be done under this lease to increase the cost of, or interfere in any manner with, the construction, operation, and maintenance of such works. It is agreed by the lessee that, if the construction of any or all of said dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone or telegraph lines, electric transmission lines, roadways, appurtenant irrigation structures or reclamation works across, over, or upon said lands should be made more expensive by reason of the existence of the improvements and workings of the lessee thereon, said additional expense is to be estimated by the Secretary of the Interior, whose estimate is to be final and binding upon the parties hereto, and that within thirty (30) days after demand

is made upon the lessee for payment of any such sums, the lessee will make payment thereof to the United States, or its successors, constructing such dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, appurtenant irrigation structures, or reclamation works, across, over, or upon said lands; *provided, however*, that subject to advance written approval by the United States, the location and course of any improvements or works and appurtenances may be changed by the lessee; *provided, further*, that the reservations, agreements, and conditions contained in the within lease shall be and remain applicable notwithstanding any change in the location or course of said improvements or works of lessee. The lessee further agrees that the United States, its officers, agents, and employees, and its successors and assigns shall not be held liable for any damage to the improvements or workings of the lessee resulting from the construction, operation, and maintenance of any of the works hereinabove enumerated. Nothing in this paragraph shall be construed as in any manner limiting other reservations in favor of the United States contained in this lease.

THE LESSEE FURTHER AGREES That there is reserved to the lessor, its successors and assigns, the prior right to use any of the lands herein leased, to construct, operate, and maintain dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, or appurtenant irrigation structures, and also the right to remove construction materials therefrom, without any payment made by the lessor or its successors for such right, with the agreement on the part of the lessee that if the construction of any or all of such dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, or appurtenant irrigation structures across, over, or upon said lands or the removal of construction materials therefrom, should be made more expensive by reason of the existence of improvements or workings of the lessee thereon, such additional expense is to be estimated by the Secretary of the Interior, whose estimate is to be final and binding upon the parties hereto, and that within thirty (30) days after demand is made upon the lessee for payment of any such sums, the lessee will make payment thereof to the United States or its successors constructing such dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, or appurtenant irrigation structures across, over, or upon said lands or removing construction materials therefrom. The lessee further agrees that the lessor, its officers, agents, and employees and its successors and assigns shall not be held liable for any damage to the improvements or workings of the lessee resulting from the construction, operation, and maintenance of any of the works herein above enumerated. Nothing contained in this paragraph shall be construed as in any manner limiting other reservations in favor of the lessor contained in this lease.

To insure against the contamination of the waters of the \_\_\_\_\_ Reservoir,

\_\_\_\_\_ Project, State of \_\_\_\_\_, the lessee agrees that the following further conditions shall apply to all drilling and operations on lands covered by this lease, which lie within the flowage or drainage area of the Reservoir, as such area is defined by the Bureau of Reclamation:

1. The drilling sites for any and all wells shall be approved by the Superintendent, Bureau of Reclamation, \_\_\_\_\_ Project, before drilling begins. Sites for the construction of pipe-line rights-of-way or other authorized facilities shall also be approved by the Superintendent before construction begins.

2. All drilling or operation methods or equipment shall, before their employment, be inspected and approved by the Superintendent of the \_\_\_\_\_ Project, \_\_\_\_\_, and by the supervisor of the U.S. Geological Survey having jurisdiction over the area.

GP-135

(02/03)

SPECIAL STIPULATION - BUREAU OF RECLAMATION

To avoid interference with recreation development and/or impacts to fish and wildlife habitat and to assist in preventing damage to any Bureau of Reclamation dams, reservoirs, canals, ditches, laterals, tunnels, and related facilities, and contamination of the water supply therein, the lessee agrees that the following conditions shall apply to all exploration and developmental activities and other operation of the works thereafter on lands covered by this lease:

1. Prior to commencement of any surface-disturbing work including drilling, access road work, and well location construction, a surface use and operations plan will be filed with the appropriate officials. A copy of this plan will be furnished to the Regional Director, Great Plains Region, Bureau of Reclamation, P.O. Box 36900, Billings, MT 59107-6900, for review and consent prior to approval of the plan. Such approval will be conditioned on reasonable requirements needed to prevent soil erosion, water pollution, and unnecessary damages to the surface vegetation and other resources, including cultural resources, of the United States, its lessees, permittees, or licensees, and to provide for the restoration of the land surface and vegetation. The plan shall contain provisions as the Bureau of Reclamation may deem necessary to maintain proper management of the water, recreation, lands structures, and resources, including cultural resources, within the prospecting, drilling, or construction area.

Drilling sites for all wells and associated investigations such as seismograph work shall be included in the above-mentioned surface use and operation plan.

If later explorations require departure from or additions to the approved plan, these revisions or amendments, together with a justification statement for proposed revisions, will be submitted for approval to the Regional Director, Great Plains Region, Bureau of Reclamation, or his authorized representative.

Any operations conducted in advance of approval of an original, revised, or amended prospecting plan, or which are not in accordance with an approved plan constitute a violation of the terms of this lease. The Bureau of Reclamation reserves the right to close down operations until such corrective action, as is deemed necessary, is taken by the lessee.

2. No occupancy of the surface of the following excluded areas is authorized by this lease. It is understood and agreed that the use of these areas for Bureau of Reclamation purposes is superior to any other use. The following restrictions apply only to mineral tracts located within the boundary of a Bureau of Reclamation project where the United States owns 100 percent of the fee mineral interest.

- a. Within 500 feet on either side of the centerline of any and all roads or highways within the leased area.
- b. Within 200 feet on either side of the centerline of any and all trails within the leased area.
- c. Within 500 feet of the normal high-water line of any and all live streams in the leased area.
- d. Within 400 feet of any and all recreation developments within the leased area.
- e. Within 400 feet of any improvements either owned, permitted, leased, or otherwise authorized by the Bureau of Reclamation within the leased area.
- f. Within 200 feet of established crop fields, food plots, and tree/shrub plantings within the leased area.
- g. Within 200 feet of slopes steeper than a 2:1 gradient within the leased area.
- h. Within established rights-of-way of canals, laterals, and drainage ditches within the leased area.
- i. Within a minimum of 500 feet horizontal from the centerline of the facility or 50 feet from the outside toe of the canal, lateral, or drain embankment, whichever distance is greater, for irrigation facilities without clearly marked rights-of-way within the leased area.
- j. Providing that appropriate environmental compliance measures can be ensured, and providing further that Reclamation project works and other public interests can be protected, Reclamation may consider, on a case-by-case basis, waiving the requirement specified in Section 2 hereof. **HOWEVER, LESSEES ARE ADVISED THAT OBTAINING SUCH A WAIVER CAN BE A DIFFICULT, TIME CONSUMING, AND COSTLY PROCESS WITH NO GUARANTEE THAT RECLAMATION WILL GRANT THE REQUESTED WAIVER.**

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3. No occupancy of the surface or surface drilling will be allowed in the following areas. In addition, no directional drilling will be allowed that would intersect the subsurface zones delineated by a vertical plane in these areas. The following restrictions apply only to mineral tracts located within the boundary of a Bureau of Reclamation project, where the United States owns 100 percent of the fee mineral interest in said tract, or tracts.

a. Within 1,000 feet of the maximum water surface, as defined in the Standard Operating Procedures (SOP), of any reservoirs and related facilities located within the leased area.

b. Within 2,000 feet of dam embankments and appurtenance structures such as spillway structures, outlet works, etc.

c. Within one-half (1/2) mile horizontal from the centerline of any tunnel within the leased area.

d. Providing that appropriate environmental compliance measures can be ensured, and providing further that Reclamation project works and other public interests can be protected. Reclamation may consider, on a case-by-case basis, waiving the requirements specifies in Section 3 hereof. **HOWEVER, LESSEES ARE ADVISED THAT OBTAINING SUCH A WAIVER CAN BE A DIFFICULT, TIME CONSUMING, AND COSTLY PROCESS WITH NO GUARANTEE THAT RECLAMATION WILL GRANT THE REQUESTED WAIVER.**

4. The distances stated in items 2 and 3 above are intended to be general indicators only. The Bureau of Reclamation reserves the right to revise these distances as needed to protect Bureau of Reclamation facilities.

5. The use of explosives in any manner shall be so controlled that the works and facilities of the United States, its successors and assigns, will in no way be endangered or damaged. In this connection, an explosives use plan shall be submitted to and approved by the Regional Director, Great Plains Region, Bureau of Reclamation, or his/her authorized representative.

6. The lessee shall be liable for all damage to the property of the United States, its successors or assigns, resulting from the exploration, development, or operation of the works contemplated by this lease, and shall further hold the United States, its successors or assigns, and its officers, agents, and employees, harmless from all claims of third parties for injury or damage sustained or in any way resulting from the exercise of the rights and privileges conferred by the lease.

7. The lessee shall be liable for all damages to crops or improvements of any entryman, nonmineral applicant, or patentee, their successors or assigns, caused by or resulting from the drilling or other operations of the lessee, including reimbursement of any entryman or patentee, their successors or assigns, for all construction, operation, and maintenance charges becoming due on any portion of their said lands damaged as a result of the drilling or other operation of the lessee.

8. In addition to any other bond required under the provisions of this lease, the lessee shall provide such bond as the United States may at any time require for damages which may arise under the liability provisions of Section six (6) and seven (7) above.

